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"AS-BUILT" DESIGN SPECIFICATION
FOR A

P1A SOFTWARE SYSTEM MODIFIED DISPLAY SUBSYSTEM

Job Order 73-345

AD 73-345-01

Prepared By

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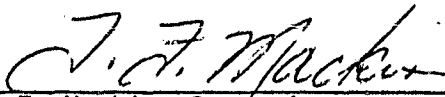
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"AS-BUILT" DESIGN SPECIFICATION
FOR A
PIA SOFTWARE SYSTEM MODIFIED DISPLAY SUBSYSTEM

Job Order 73-345
AD 73-345-01

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PROPORTION ESTIMATE PROCESSOR

1.0 SCOPE

This document contains the design of the Proportion Estimate Processor which was written to satisfy the software requirement of Part A of the P1A Experiment. The purposes of the project are as follows:

- (1) To select the dots to be labelled.
- (2) To create tables of green numbers and brightness values for all selected dots per acquisition.
- (3) To create scatter plots of green numbers vs brightness for each acquisition for all selected dots. If labels have been provided then scatter plots of only categories of interest can be optionally produced.
- (4) To produce trajectory plots of green number vs brightness at differing acquisition times for each dot. These plots need to be in the same order as the list of selected dots. When labels are provided only plots of dots of categories of interest are to be produced.

2.0 APPLICABLE DOCUMENTS

The following documents form a part of this specification:

AD NAS 9-15800 Software for Testing of Crop Proportion Estimator for PIA.

AD 74-422-20 Documentation of Spectral Aid Software.

3.0 SYSTEM DESCRIPTION

3.1 HARDWARE DESCRIPTION

The software for the Pixel Selection and Display Processor is operational on the IBM 3031 computer at Purdue.

3.2 SOFTWARE DESCRIPTION

Part A of the PIA Experiment selects representative pixels from a full scene, creates a set of spectral aids, allows analysts to assign labels to the selected pixels and creates a set of labelled spectral aids.

The user specifies the segment number, acquisition dates, pixel selection criteria and report header information through a control parameter file (3.3.1).

The processor uses the pixel selection criteria to select the 209 10x10 pixels, the 209 5x5 pixels, both of these sets or the 209 10x10 pixels plus enough pixels to satisfy the proportional requirement for each cluster. If proportional representation is selected, a 1-channel tape created by a clustering programs is used to specify the cluster assigned to each pixel. After the pixels are selected, various reports are created to display the pixels and their associated radiance values.

The AI's can assign labels to the selected pixels or alternative pixels using the CMS370 text editor to enter the labels or modify the selection of the pixels. The processor can then be used to create input files for the Proportion Estimator Processor.

The various reports can be re-created to display the pixels, their associated radiance values and their labels.

3.3 FILE DESCRIPTION

3.3.1 USER DEFINED FILE (SEGMENT NUMBER) CCA

The following records are input to the PIA system and are analysed by SETPID. In all records the "keyword" begins in column 1 and any parameters on the card are in columns 11 through 72. Numbers in a series are separated by commas; blanks are optional.

1. "DOTS" RECORD

EXAMPLE: DOTS 75

This record specifies the total number of pixels to be proportionally distributed between the clusters.

2. "CHANNEL" RECORD

EXAMPLE: CHANNEL 1,2,3,4,7,8

This card specifies the channel numbers to be used from the multi-channel data tape.

3. "SOIL LINE" RECORD

EXAMPLE: SOIL LINE 1,-5,7,4

This record specifies the average soil line for each acquisition.

4. "ACQUISITION DATE" RECORD

EXAMPLE: ACQUISITION 79150, 79182, 79227

This record specifies the acquisition date for each acquisition.

5. "SELECTION" RECORDS

EXAMPLE: SELECTION W,B,S

This optional record specifies the labels to be plotted. It is used only if the LABEL record specifies labelling.

6. "DATE" RECORD

EXAMPLE: DATE MAY 20, 1980

This record specifies the date the report was created.

7. "SEGMENT" RECORD

EXAMPLE: SEGMENT 1659

This record specifies the segment number.

8. "LABEL" RECORD

EXAMPLE: LABEL LABELLED

This record specifies whether all the pixels are to be used (UNLABELLED) or only the labelled pixels (LABELLED).

9. "AI" RECORD

EXAMPLE: AI JO MARIE JONES

This optional record specifies the analyst's name.

10. "FILE" RECORD

EXAMPLE: FILE "LISTRJ1"

This record specifies the name of the input file.

11. "END" RECORD

EXAMPLE: *END

This mandatory record specifies the end of the control cards.

3.3.2 PIA SYSTEM CREATED FILES

3.3.2.1 (Segment number) CLUST D

Origin

CLUSTAPE Program.

Format

Record	Columns	Format	Contents
1-117	1-196	19614	Cluster

3.3.2.2 (Segment number) LIST A

Origin

SELDOTS Program.

Format

<u>Record</u>	<u>Columns</u>	<u>Format</u>	<u>Contents</u>
1	1-4	I4	Number of selected pixels
	5-30	26A1	PIXELS SELECTED FOR SEGM
	31-34	I4	Segment number
2-N	1-4		Blanks
	5-8	I4	Sample number
	9-12	I4	Line number
	13-16	I4	Cluster number
	17-20	I4	Grid number
N+1	1-4	4A1	*END
N+2	1-15	15A1	GRID INDICES =
	16-65	10I5	Beginning and ending locations for the 5 grids
N+3	1-20	20A1	Date list was created

3.3.2.3 (Segment Number) PROC2 A

Origin

SELDOCS Program.

Format

Record	Columns	Format	Contents
1	1-4	I4	Number of clusters in file
2	1-60	15I4	Number of pixels in cluster 1-15
3	1-60	15I4	Number of pixels in cluster 16-30
4	1-60	15I4	Resulting cluster number after combining for small clusters 1-15.
5	1-60	15I4	Resulting cluster number after combining for small clusters 16-30.

3.3.2.4 (Segment Number) RAD D

Origin

GRBRTAPE Program.

Format

Record	Columns	Format	Contents
1-117	1-N*	NI4	Radiance values

*N = 196 * number of channels

3.3.2.5 (Segment Number) LISTXXXX* A

Origin

WRTRIG Program.

Format

<u>Record</u>	<u>Columns</u>	<u>Format</u>	<u>Contents</u>
1	1-4	I4	Number of selected pixels
	5-30	26A1	PIXELS SELECTED FOR
	31-34	I4	Segment number
2-N	1-4		Blanks
	5-8	I4	Sample number
	9-12	I4	Line number
N+1	1-4	4A1	*END
N+2	1-15	15A1	GRID INDICES =
	16-65	10I5	Beginning and ending locations for the 5 grids
N+3	1-20	20A1	Date original LIST file created
N+4	1-20	20A1	Date this file created
N+5	1-20	20A1	Dates of any updating of file
*Characters	1-4	LIST	
		R - reformatted	
		I - integrated	
		G - groundtruth	
	6-7	Analyst's initials	
	8	Version number	

3.3.2.6 (Segment Number) PIAXXXX* A

Origin

COMPARE Program.

Format

<u>Record</u>	<u>Columns</u>	<u>Format</u>	<u>Contents</u>
1	1-4	I4	Number of selected pixels
	5-30	26A1	PIXELS SELECTED FOR
	31-34	I4	Segment numbers
2-N	1-4	A4	Analyst label
	5-8	I4	Sample number
	9-12	I4	Line number
	3-16	I4	Cluster number
	17-20	I4	Grid number
N+1	1-4	4A1	*END
N+2	1-15	15A1	GRID INDICES =
	16-65	10I5	Beginning and ending locations for the 5 grids
*Characters 1-3		P1A	
		R - reformatted	
		I - integrated	
		G - groundtruth	
	5-6	Analyst's initials	
	7	Version number	

3.4 SOFTWARE DESCRIPTION

3.4.1 CLUSTAPE PROGRAM

Purpose

CLUSTAPE moves data from a 1-channel Universal Formatted Tape to a temporary disk file.

Linkages

None.

Interface

None.

Inputs

1-channel tape in Universal Format.

Outputs

Randomly accessible file. EXEC parameter &1 CLUST D

Storage Requirement

Not applicable.

Description

CLUSTAPE reads each line of the 1-channel tape and creates a disk record addressable by the line number of the cluster labels on the tape.

Flowchart

Not applicable.

Listing

See Appendix B for program.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2 SELDOTS PROGRAM

Purpose

SELDOTS makes a list of pixels to be evaluated by AI's.

Linkages

SELDOTS calls SETPID, NRAND, RDSUMS, FIL209, FIL5X5, FIL105, FIL510, FILRAN and WRTLST.

Interface

Interface is accomplished through common blocks /CLSTR/, /LISTRQ/, /MISC/, and /REQUIR/, as described in Appendix A.

Inputs

Multi-channel disk file	EXEC parameter &1 CLUST D
Control parameter file	EXEC parameter &1 CC

Outputs

File of selected pixels	EXEC parameter &1 LIST
File for procedure 2	EXEC parameter &1 PROC2
TABLE I written to printer file	
TABLE IA written to printer file	

Storage Requirement

Not applicable.

Description

SELDOTS uses the NODOTS parameter in the control parameter file to determine the method for selecting the dots. If the NODOTS is a 1, 2 or 3 the 209 10x10 pixels, the 209 5x5 pixels or the 418 10x10 and 5x5 pixels will be selected respectively. If NODOTS is greater than 3, the 209 10x10 dots will be chosen and additional dots chosen to satisfy the proportional requirements for the clusters.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.1 SOFTWARE COMPONENT NO. 1 (RDSUMS)

Purpose

RDSUMS counts the number of points in each cluster and calculates the number of pixels required for each cluster to satisfy the proportional requirement.

Linkages

RDSUMS is called by SELDOTS.

Linkages

Interface is accomplished through common blocks /CLSTR/, /LISTRQ/ and /MISC/ as described in Appendix A.

Inputs

1-channel disk file EXEC parameter &1 CLUS D

Outputs

Table written to printer showing symbol, count, percent, number required and index for each cluster. Number of zero cluster written to printer.

Storage Requirement

Not applicable.

Description

The 1-channel disk file is read and the number of pixels in each cluster and the percentage of the total is computed. Clusters with less than three percent are grouped together.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.2 SOFTWARE COMPONENT NO. 2 (FIL209)

Purpose

FIL209 moves the data on an 209 10x10 dots to the list file.

Linkages

FIL209 is called by SELDOTS.

Interface

Interface is accomplished through common blocks /CLSTR/, /LISTRQ/, /MISC/ and /REQUIR/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

FIL209 saves the list of the 10x10 dots including their line number, column and cluster index. The count of pixels for each cluster type is accumulated.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.3 SOFTWARE COMPONENT NO. 3 (FIL5X5)

Purpose

FIL5X5 fills requirements with dots chosen at random from lines 5-105, samples 5-185.

Linkages

FIL5X5 is called by SELDOTS. FIL5X5 calls UNIF and CKPUT.

Interface

Interface is accomplished through common blocks /CLSTR/, /LISTRQ/, /MISC/ and /REQUIR/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

FIL5X5 gets two random numbers using function UNIF. These numbers are used to calculate a line and pixel location on the 5X5 grid. If the complete grid is to be used, the dot is added to the list of selected pixels. If proportional requirements for the clusters are required, the dot is added to the list of selected pixels only if more pixels are needed for its clusters.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.4 SOFTWARE COMPONENT NO. 4 (FIL105)

Purpose

FIL105 fills requirements with dots chosen at random from lines 10-110, samples 5-185.

Linkages

FIL105 is called by SELDOTS. FIL105 calls UNIF and CKPUT.

Interface

Interface is accomplished through common blocks /CLUCTR/, /LISTRQ/, /MISC/ and /REQUIR/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

FIL105 gets two random numbers using function UNIF. These numbers are used to calculate a line and pixel location on the 10x5 grid. The dot is added to the list of selected pixels, if more pixels are required for its cluster.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.5 SOFTWARE COMPONENT NO. 5 (FIL510)

Purpose

FIL510 fills requirements with dots chosen at random from lines 5-115, samples 10-190.

Linkages

FIL510 is called by SELDOTS. FIL510 calls UNIF, CKPUT.

Interface

Interface is accomplished through common blocks /CLSTR/, /LISTRQ/, /MISC/ and /REQUIR/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

FIL510 gets two random numbers using function UNIF. These numbers are used to calculate a line and pixel location on the 5x10 grid. The dot is added to the list of selected pixels, if more pixels are required for its cluster.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.6 SOFTWARE COMPONENT NO. 6 (FILRAN)

Purpose

FILRAN fills requirements with dots chosen at random from the complete field.

Linkages

FILRAN is called by SELDOTS. FILRAN calls UNIF and CKPUT.

Interface

Interface is accomplished through common blocks /CLSTR/, /MISC/ and /REQUIR/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

FILRAN gets two random numbers using function UNIF. These numbers are used as the line and pixel location in the complete field. The dot is added to the list of selected pixels, if more pixels are required for its cluster.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.7 SOFTWARE COMPONENT NO. 7 (CKPUT)

Purpose

CKPUT stores the pixel in the list.

Linkages

CKPUT is called by FIL5X5, FIL510, FIL105 and FILRAN.

Interface

Interface is accomplished through common blocks /CLSTR/, /LISTRQ/, /MISC/ and /REQUIR/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

CKPUT returns immediately if pixel has been used. If the pixel has not been used, the corresponding line of the 1-channel file is read and the index of its cluster is determined. If more pixels are needed for this cluster, the dot is added to the list.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.8 SOFTWARE COMPONENT 8 (WRTLST)

Purpose

WRTLST writes the file (segment number) LIST and TABLE I and TABLE IA.

Linkages

WRTLST is called by SELDOTS. WRTLST calls HEADTI and HEDTIA.

Interface

Interface is accomplished through common blocks /CLSTR/, /LISTRQ/, /MISC/ and /REQUIR/ as described in Appendix A.

Inputs

None.

Outputs

List file (Segment number) LIST A
TABLE I written to printer file
TABLE IA written to printer file

Storage Requirement

Not applicable.

Description

WRTLST writes Tables I and IA and the LIST file of all the selected pixels.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.9 SOFTWARE COMPONENT NO. 9 (HEADTI)

Purpose

HEADIT writes the report heading for Table I.

Linkages

HEADTI is called by WRTLST.

Interface

Interface is accomplished through common blocks /MISC/ as described in Appendix A.

Inputs

None.

Outputs

Table I heading written to printer file.

Storage Requirement

Not applicable.

Description

HEADTI writes the report heading containing the segment number and the acquisition dates to the printer file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.2.10 SOFTWARE COMPONENT NO. 10 (HEDTIA)

Purpose

HEDTIA writes the report heading for Table IA.

Linkages

HEDTIA is called by WRTLST.

Interface

Interface is accomplished through common blocks /LISTRQ/ and /MISC/ as described in Appendix A.

Inputs

None.

Outputs

Table IA heading written to printer file.

Storage Requirement

Not applicable.

Description

HEDTIA writes the report heading containing the segment number and the acquisition dates to the computer file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.3 GRBRTAPE PROGRAM

Purpose

GRBRTAPE moves data from a multi-channel Universal Formatted Tape to a temporary disk file.

Linkages

None.

Interface

None.

Inputs

Multi-channel tape in Universal Format.

Control Parameter File EXEC parameter &1 CC A

Outputs

Randomly accessible file EXEC parameter &1 RAD D

Storage Requirement

Not applicable.

Description

GRBRTAPE reads each line of the multi-channel tape and creates a disk record addressable by the line number of the cluster labels on the tape.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.4 LISTDOT PROGRAM

Purpose

The LISTDOT program outputs a Table III report which is a report of green number and brightness values in dot number order for all grids.

Linkages

LISTDOT is the main program which calls SETPID, READAI, RADRED, and GRIDØP.

Interfaces

LISTDOT interfaces with all the called routines by use of common blocks /LIST/, /BUFFER/, /RADIAN/, /MISC/, /INFØ/, as described in Appendix A.

Inputs

File of selected dots	EXEC parameter &1 &2
File of multichannel radiance values	EXEC parameter &1 RAD D
Control parameter file	EXEC parameter &1 CC A

Outputs

Table III report on print file.

Storage Requirements

Not applicable.

Description

LISTDOT is a main program which calls routines to initialize the input parameters, read the selected line and pixel numbers, read the radiance values, and write the report.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.4.1 SOFTWARE COMPONENT NO. 1 (READAI)

Purpose

Subroutine READAI reads the data describing the selected pixels.

Linkages

READAI is called by LISTDOT.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /INFØ/, as described in Appendix A.

Inputs

File of selected dots EXEC parameter &1 &2

Outputs

None.

Storage Requirement

Not applicable.

Description

READAI reads the file of selected dots into the matrix LBLDAT. It also reads and saves the beginning and ending addresses for each grid and the date the last time the file was updated.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.4.2 SOFTWARE COMPONENT NO. 2 (RADRED)

Purpose

Subroutine RADRED reads radiance values for selected pixels.

Linkages

RADRED is called by LISTDOT.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /INFO/, /RADIANT/, as described in Appendix A.

Inputs

File of multichannel radiance values EXEC parameter &1 RAD D

Outputs

None.

Storage Requirement

Not applicable.

Description

RADRED reads the selected lines of radiance values and moves the values for each pixel selected into the matrix IDOTRD after subtracting the soil line from even number channels to form the green number. IDOTRD contains the values according to the order of the output, i.e. green number, then brightness for each acquisition.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.4.3 SOFTWARE COMPONENT NO. 3 (GRIDOP)

Purpose

Subroutine GRIDOP writes Table III which contains number, line, pixel, label, and green number and brightness values.

Linkages

GRIDOP is called by LISTDOT. GRIDOP calls HEDIII, TITLDT, and CALDOT.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /INFO/, /RADIAN/, as described in Appendix A.

Inputs

Not applicable.

Outputs

Table III report on print file.

Storage Requirement

Not applicable.

Description

GRIDOP outputs the whole Table III report. For each grid it prints up to 6 acquisitions of green number, brightness, and label. For grid 1 it also prints the dot number. It calls TITLDT to print the title when needed.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.4.4 SOFTWARE COMPONENT NO. 4 (HEDIII)

Purpose

Subroutine HEDIII writes the heading for Table III.

Linkages

HEDIII is called by LISTDOT.

Interface

Not applicable.

Inputs

Not applicable.

Outputs

Two lines of heading for Table III (report by dot number) on print file.

Storage Requirement

Not applicable.

Description

HEDIII writes the heading for Table III.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.4.5 SOFTWARE COMPONENT NO. 5 (TITLDT)

Purpose

Subroutine TITLDT writes part of the title for Table III and the column headings for the report.

Linkages

TITLDT is called by GRIDOP.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /INFO/, /RADIAN/, as described in Appendix A.

Inputs

Not applicable.

Outputs

Table III - Line with segment number and date generated and titles for all columns for up to 4 acquisitions on print file.

Storage Requirements

Not applicable.

Description

TITLDT prints the segment and date generated for each page of the report, the grid number, and then prints the column headings for the data for up to 4 acquisitions.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.5 LISTGRN PROGRAM

Purpose

LISTGRN prints Table IV which contains green number and brightness ordered by green number.

Linkages

LISTGRN calls SETPID, READAI, MOVEIT, PISRT, and REPGRD.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /INFO/, /RADIAN/, /REPORT/, /WHDATE/ as described in Appendix A and calling arguments.

Inputs

File of selected dots	EXEC parameter &1 &2
File of multichannel radiance values	EXEC parameter &1 RAD D
File of control parameters	EXEC parameter &1 CC

Outputs

Table IV report on printer file.

Storage Requirement

Not applicable.

Description

LISTGRN prints the Table IV report of green number and brightness ordered by green number. It is the main program which, after reading all the input files, processes and outputs the data by moving data to the output buffer, calls a sort routine, and then calls the report generator routine to output up to 4 acquisitions in one report. It outputs the 5th and 6th acquisitions as a second report, if they are requested.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.5.1 SOFTWARE COMPONENT NO. 1 (READAI)

Purpose

Subroutine READAI reads the data describing the selected pixels.

Linkages

READAI is called by LISTGRN.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /INFO/ as described in Appendix A.

Inputs

File of selected dots EXLC parameter &1 &2

Outputs

None.

Storage Requirement

Not applicable.

Description

READAI reads the file of selected dots into the matrix LBLDAT. It also reads and saves the beginning and ending addresses for each grid and the date the last time the file was updated.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.5.2 SOFTWARE COMPONENT NO. 2 (RDRADN)

Purpose

Subroutine RDRADN reads radiance values for selected pixels.

Linkages

RDRADN is called by LISTGRN.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /INFO/ as described in Appendix A.

Inputs

File of multichannel radiance values EXEC parameter &1 RAD D

Outputs

None.

Storage Requirement

Not applicable.

Description

RDRADN reads the selected lines of radiance values and moves the values for each pixel selected into the matrix IDOTRD (after subtracting the soil line from the greenness channels). IDOTRD contains the values according to channel number.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.5.3 SOFTWARE COMPONENT NO. 3 (MOVEIT)

Purpose

Subroutine MOVEIT moves data values from input matrix to a hold area for sorting.

Linkages

MOVEIT is called by LISTGRN. MOVEIT calls CALDOT.

Interface

Interface is accomplished through common blocks /LIST/, /INFQ/, /RADIAN/ as described in Appendix A, and calling arguments.

Inputs

Call MOVEIT (ITEMP)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
ITEMP	(999,6)	OUT	Hold area for sorting

Outputs

None.

Storage Requirement

Not applicable.

Description

MOVEIT moves two channels of data for one acquisition from the IDOTRD matrix into the ITEMP matrix. It also moves the line and pixel for each dot into ITEMP and calculates the dot number and stores it.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.5.4 SOFTWARE COMPONENT NO. 4 (REPGRD)

Purpose

Subroutine REPGRD writes the Table IV report of green number within grid.

Linkages

REPGRD is called by LISTGRN. REPGRD calls HEADIV and TITLEG.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/, /RADIAN/, /REPORT/, /INFO/ as described in Appendix A and calling arguments.

Inputs

Call REPGRD (NUMBR)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
NUMBR	—	IN	Number of acquisitions to output on current report.

Outputs

Table IV report of green number on printer file.

Storage Requirement

Not applicable.

Description

REPGRD controls the output of the Table IV report by calling the HEADIV subroutine to write the headings, the TITLEG subroutine to write title information and column titles for each page of the report, and then writes the data for up to four acquisitions.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.5.5 SOFTWARE COMPONENT NO. 5 (HEADIV)

Purpose

Subroutine HEADIV prints the header for the Table IV report.

Linkages

HEADIV is called by TITLEG.

Interface

Not applicable.

Inputs

None.

Outputs

Table IV header on the printer file.

Storage Requirement

Not applicable.

Description

HEADIV writes the Table IV heading to the print file. The heading includes two lines:

TABLE IV
ORDERED BY GREEN NUMBER

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.5.6 SOFTWARE COMPONENT NO. 6 (TITLEG)

Purpose

Subroutine TITLEG writes Table IV report title information and column titles for up to four acquisitions.

Linkages

TITLEG is called by REPGRD.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /INFO/, /RADIAN/, /REPORT/, /WHDATE/ as described in Appendix A and calling arguments.

Inputs

Call TITLEG (NUMBR)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DESCRIPTION</u>
NUMBR	---	IN	Number of acquisitions to write out for current page.

Outputs

Table IV report by green number on printer file.

Storage Requirement

Not applicable.

Description

TITLEG writes the segment and date generated line for Table IV and the column headings for each acquisition for up to four acquisitions. If more than four acquisitions have been requested, the first four are output and then the remaining one or two are output.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6 MULTIHIT PROGRAM

Purpose

MULTIHIT writes the Table V report of multiple "hits".

Linkages

MULTIHIT calls SETPID, READAI, RDRADN, MOVEIT, PISRT, MATCH, and REPGRD.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/, /RADIAN/, /REPORT/, /WHDATE/ as described in Appendix A and calling arguments.

Inputs

File of selected dots	EXEC parameter &1 &2
File of multichannel radiance values	EXEC parameter &1 RAD D
File of control parameters	EXEC parameter &1 CC

Outputs

Table V report of multihits on printer file.

Storage Requirement

Not applicable.

Description

MULTIHIT writes the Table V report of multihits for up to six acquisitions. After initializing, MULTIHIT calls subroutines to read the selected dot file and read the radiance values for each pixel. Subroutines then move the radiance values for each pair of channels for an acquisition into a buffer for sorting, and then sort the data (first by green number and then by brightness within green number). Up to four acquisition are sorted and then output as Table V. If there are any other acquisitions, the processing

sequence is repeated for up to two more acquisitions.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6.1 SOFTWARE COMPONENT NO. 1 (READAI)

Purpose

Subroutine READAI reads the data describing the selected pixels.

Linkages

READAI is called by MULTI HIT.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /INFO/ as described in Appendix A.

Inputs

File of selected dots EXEC parameter &1 &2

Outputs

None.

Storage Requirement

Not applicable.

Description

READAI reads the file of selected dots into the matrix LBLDAT. It also reads and saves the beginning and ending addresses for each grid and the date the last time the file was updated.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6.2 SOFTWARE COMPONENT NO. 2 (RDRADN)

Purpose

Subroutine RDRADN reads radiance values for selected pixels.

Linkages

RDRADN is called by MULTIHIT.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /INFO/ as described in Appendix A.

Inputs

File of multichannel radiance values EXEC parameter &1 RAD D

Outputs

None.

Storage Requirement

Not applicable.

Description

RDRADN reads the selected lines of radiance values and moves the values for each pixel selected into the matrix IDOTRD (after subtracting the soil line from the greenness channels). IDOTRD contains the values according to channel number.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6.3 SOFTWARE COMPONENT NO. 3 (MOVEIT)

Purpose

Subroutine MOVEIT moves data values from input matrix to a hold area for sorting.

Linkages

MOVEIT is called by MULTIHIT. MOVEIT calls CALDOT.

Interface

Interface is accomplished through common blocks /LIST/, /INFO/, /RADIAN/ as described in Appendix A and calling arguments.

Inputs

Call MOVEIT (ITEMP)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
ITEMP	(999,6)	OUT	Hold area for sorting.

Outputs

None.

Storage Requirement

Not applicable.

Description

MOVEIT moves two channels of data for one acquisition from the IDOTRD matrix into the ITEMP matrix. It also moves the line, pixel, and label for each dot into ITEMP from LBLDAT. It calls CALDOT to calculate the dot number and convert it to alphanumerics for printout.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6.4 SOFTWARE COMPONENT NO. 4 (MATCH)

Purpose

Subroutine MATCH creates a list of multiple hits.

Linkages

MATCH is called by MULTIHIT. MULTIHIT calls AFRMIN.

Interface

Interface is accomplished through calling arguments.

Inputs

Call MATCH (IACQ, NODOTS, INDEX)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DESCRIPTION</u>
IACQ	(999,6)	IN/OUT	Output data matrix for one acquisition
NODOTS	—	IN	Number of dots to process
INDEX	—	OUT	Number of entries in multihit report for current acquisition.

Outputs

None.

Storage Requirement

Not applicable.

Description

MATCH creates the list and counts for the multiple hits report Table V. It checks for duplicate green number and brightness among dots and counts the number of dots with the same green number and brightness. After determining all duplicates, it converts all integer data to alphabetic and scores that alphabetic data into the output acquisition matrix.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6.5 SOFTWARE COMPONENT NO. 5 (REPGRD)

Purpose

Subroutine REPGRD writes the Table V report of multihits.

Linkages

REPGRD is called by MULTI HIT. REPGRD calls HEADV and TITLEG.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/, /RADIAN/, /REPORT/, as described in Appendix A, and calling arguments.

Inputs

Call REPGRD (number)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
NUMBR	—	IN	Number of acquisitions to process.

Outputs

Report V on printer file.

Storage Requirement

Not applicable.

Description

REPGRD controls the output of the heading and column titles and then the data for the specified number of acquisitions.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6.6 SOFTWARE COMPONENT NO. 6 (HEADV)

Purpose

Subroutine HEADV writes the first page heading for the Table V multiple hit report.

Linkages

HEADV is called by REPGRD.

Interface

Not applicable.

Inputs

None.

Outputs

Heading for Table V report on printer file.

Storage Requirement

Not applicable.

Description

HEADV writes the first page heading for the Table V multiple hit report.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.6.7 SOFTWARE COMPONENT NO. 7 (TITLEG)

Purpose

Subroutine TITLEG writes Table V report title information and column titles for up to 4 acquisitions.

Linkages

TITLEG is called by REPGRD.

Interface

Interface is accomplished through common blocks /MISC/, /INFO/, /RADIAN/, /REPORT/, /WHDATE/, as described in Appendix A, and calling argument.

Inputs

Call TITLEG (NUMBR)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DESCRIPTION</u>
NUMBR	—	IN	Number of acquisitions

Outputs

Heading information and column headings for Table V report on printer file.

Storage Requirement

Not applicable.

Description

TITLEG writes the segment and date generated line for the Table V report. It skips to a new page before writing that line, if needed. It then writes the column headings for the report and increments the page counter.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.7 SCATTER PROGRAM

Purpose

SCATTER creates a scatter plots of green number vs brightness for each acquisition for all dots on the list.

Linkages

SCATTER calls SETPID, RDSLST, RDRADN, MOVEGB and SCATT.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

File of control parameters	EXEC parameter &1 CC A
File of selected pixels	EXEC parameter &1 &2 A
File of multi-channel radiance values	EXEC parameter &1 RAD D

Outputs

Scatter plots of green number vs brightness for each acquisition written to printer file.

Storage Requirement

Not applicable.

Description

SCATTER calls subroutines to (1) read the control parameters, (2) read the list of selected pixels, (3) read the radiance values for the selected pixels and (4) create the plots.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.7.1 SOFTWARE COMPONENT NO. 1 (RDSLST)

Purpose

RDSLST reads the list of selected pixels.

Linkages

RDSLST is called by SCATTER.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIANT/ as described in Appendix A.

Inputs

File of selected dots EXEC parameter &1 &2 A

Outputs

None.

Storage Requirement

Not applicable.

Description

RDSLST (1) reads the list of pixels, (2) makes a list of the cluster included in the AI labels and (3) counts the pixels for each cluster.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.7.2 SOFTWARE COMPONENT NO. 2 (RDRADN)

Purpose

RDRADN reads the radiance values for selected pixels.

Linkages

RDRADN is called by SCATTER.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

Multi-channel Radiance File EXEC parameter &1 RAD D

Outputs

None.

Storage Requirement

Not applicable.

Description

RDRADN reads the radiance values corresponding to each pixel. For each acquisition, the soil line is subtracted from the greenness value to form the green number.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.7.3 SOFTWARE COMPONENT NO. 3 (MOVEGB)

Purpose

MOVEGB moves one set of green numbers, brightness values and labels to arrays Y,X and LABELD.

Linkages

MOVEGB is called by SCATTER.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIAN/, /WHDATE/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

MOVEGB moves the green numbers and brightness values to arrays Y and X. The labels are moved to array LABELD; blank labels are changed to stars.

Flowchart

Not applicable.

Listing

See Appendix B for program.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.7.4 SOFTWARE COMPONENT NO. 4 (SCATT)

Purpose

SCATT draws a labelled plot of green number vs brightness value for the acquisition.

Linkages

SCATT is called by SCATTER. SCATT calls HEADSI.

Interface

Interface is accomplished through common blocks /MISC/, /GROUPS/ and /PLOT/ as described in Appendix A.

Inputs

None.

Outputs

SCATTER plot written to printer file.

Storage Requirement

Not applicable.

Description

SCATT creates a plot of all the dots for 1 acquisition as follows: The plot heading is written to the printer file. The plot and its axes are created. The points are represented on the plot by their label with multiple points represented by stars. The plot is written to the printer file.

3.4.7.5 SOFTWARE COMPONENT NO. 5 (HEADSI)

Purpose

HEADSI writes the plot heading.

Linkages

HEADSI is called by SCATT.

Interface

Interface is accomplished through common blocks /MISC/ and /GROUPS/ as described in Appendix A.

Inputs

None.

Outputs

Plot heading written to printer file.

Storage Requirement

Not applicable.

Description

HEADSI writes the plot heading including the segment number, date generated, soil line, categories of interest, soil line and acquisition date.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.8 PLOT4 PROGRAM

Purpose

PLOT4 creates plots of green number vs time and brightness value vs time for all dots in the file.

Linkages

PLOT4 calls SETPID, RDSLST, RDRADN, MOVEAD and PLOTT4.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

File of control parameter	EXEC parameter &1 CC A
File of selected dots	EXEC parameter &1 &2 A

Outputs

Plots of green number vs time and brightness value vs time for all dots written to the printer file.

Storage Requirement

Not applicable.

Description

PLOT4 calls subroutines to (1) read the control parameter information, (2) read the file of AI pixels, (3) read the file of radiance values and (4) create plots (4 pixels per page) of green number vs time and brightness value vs time for all dots in the LIST file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.8.1 SOFTWARE COMPONENT NO. 1 (RDSLST)

Purpose

RDSLST reads the data from the LIST file.

Linkages

RDSLST is called by PLOT4.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /GROUPS/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

File of selected dots EXEC parameter &1 &2 A

Outputs

None.

Storage Requirement

Not applicable.

Description

RDSLST (1) reads the list of pixels, (2) makes a list of the clusters included in the AI labels and (3) counts the pixels for each cluster.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.8.2 SOFTWARE COMPONENT NO. 2 (RDRADN)

Purpose

RDRADN reads the radiance values for the selected pixels.

Linkages

RDRADN is called by PLOT4.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIANT/ as described in Appendix A.

Inputs

File of multi-channel radiance values EXEC parameter &1 RAD A

Outputs

None.

Storage Requirement

Not applicable.

Description

RDRADN reads the radiance values corresponding to each pixel. For each acquisition, the soil line is subtracted from the greenness value to form the green number.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.8.3 SOFTWARE COMPONENT NO. 3 (MOVEAD)

Purpose

MOVEAD changes an array of acquisition dates in display format to an array of acquisition dates to be use as X coordinates.

Linkages

MOVEAD is called by PLOT4.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /GROUPS/, /PLOT/ and /RADIAN as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

MOVEAD changes an array of acquisition dates from display format to computational numbers by separating the characters and calling subroutine I4A1BN to convert them to integers. These integers are converted to X coordinates by changing the dates to 41 intervals through the year.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.8.4 SOFTWARE COMPONENT NO. 3 (PLOTT4)

Purpose

PLOTT4 creates the labelled plots of green number vs time and brightness value vs time (4 pixels per page).

Linkages

PLOTT4 is called by PLOT4. PLOTT4 calls HEADP4 and AFRMIN.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /GROUPS/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

None.

Outputs

Labelled plots written to printer file.

Storage Requirement

Not applicable.

Description

PLOTT4 processes the list of dots 4 dots per plot. The complete list is processed as follows. Four consecutive pixels with nonzero line numbers are located and moved to a matrix JLIST. Graphs are created and labelled for the green number vs time plots, the points are added to the plots and the plots are written to the printer file. Graphs are created and labelled for the brightness value vs time plots, the points are added to the plots and the plots are written to the printer file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.8.5 SOFTWARE COMPONENT NO. 5 (HEADP4)

Purpose

HEADP4 writes the plot heading.

Linkages

HEADP4 is called by PLOTT4.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/ and /GROUPS/ as described in Appendix A.

Inputs

None.

Outputs

Plot heading written to printer file.

Storage Requirement

Not applicable.

Description

HEADP4 writes the plot heading containing the segment number, report date, categories plotted, acquisition dates and soil lines.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.9 PLOT18 PROGRAM

Purpose

PLOT18 makes plots of green number vs brightness value through time.

Linkages

PLOT18 calls SETPID, RDSLST, RDRADN, MOVEAD and PLT18.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /GROUPS/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

File of selected dots	EXEC parameter &1 &2 A
File of control parameters	EXEC parameter &1 CC A

Outputs

Plots of green number vs brightness through time for all dots written to printer file.

Storage Requirement

Not applicable.

Description

PLOT18 calls subroutines to (1) read the control parameter information, (2) read the file of selected pixels, (3) read the file of radiance values and (4) create plots (18 pixels per page) of green number vs brightness value for all dots in the list file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.9.1 SOFTWARE COMPONENT NO. 1 (RDSLST)

Purpose

RDSLST reads the list of selected pixels.

Linkages

RDSLST is called by PLOT18.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

File of selected dots EXEC parameter &1 &2 A

Outputs

None.

Storage Requirement

Not applicable.

Description

RDSLST (1) reads the list of pixels, (2) makes a list of the cluster included in the AI labels and (3) counts the pixels for each cluster.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.9.2 SOFTWARE COMPONENT NO. 2 (RDRADN)

Purpose

RDRADN reads the radiance values for the selected pixels.

Linkages

RDRADN is called by PLOT18.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

File of multi-channel radiance values EXEC parameter &1 RAD D

Outputs

None.

Storage Requirement

Not applicable.

Description

RDRADN reads the radiance values corresponding to each pixel. For each acquisition, the soil line is subtracted from the greenness value to form the green number.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.9.3 SOFTWARE COMPONENT NO. 3 (MOVEAD)

Purpose

MOVEAD changes an array of acquisition dates in display format to an array of acquisition dates to be used as X coordinates.

Linkages

MOVEAD is called by PLOT18.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /MISC/, /GROUPS/, /PLOT/ and /RADIAN/ as described in Appendix A.

Inputs

None.

Outputs

None.

Storage Requirement

Not applicable.

Description

MOVEAD changes an array of acquisition dates from display format to computational numbers by separating the characters and calling subroutine I4A1BN to convert them to integers. These integers are converted to X coordinates by changing the dates to 41 intervals through the year.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.9.4 SOFTWARE COMPONENT NO. 4 (PLT18)

Purpose

PLT18 draws labelled plots of green number vs brightness through time.

Linkages

PLT18 is called by PLOT18.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /PLOT/ and /RANDOM/ as described in Appendix A.

Inputs

None.

Outputs

Labelled plots written to printer file.

Storage Requirement

Not applicable.

Description

PLT18 processes the list of dots 18 dots per page. The complete list is processed as follows: Four consecutive pixels with nonzero line numbers are located and moved to a matrix JLIST. The plot axes are created labelled the points are added to the plots and the plots are written to the printer file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.9.5 SOFTWARE COMPONENT NO. 5 (HEDP18)

Purpose

HEDP18 writes the report heading.

Linkages

HEDP18 is called by PLOT18.

Interface

Interface is accomplished through common blocks /MISC/ and /GROUPS/ as described in Appendix A.

Inputs

None.

Outputs

Plot heading written to printer file.

Storage Requirement

Not applicable.

Description

HEDP18 writes the plot heading including the segment number, date of report, categories plotted, acquisition dates and soil lines.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.10 WRTRIG PROGRAM

Purpose

WRTRIG copies a selected portion of the selected dots file onto a new file.

Linkages

Not applicable.

Interface

Interface is accomplished through common blocks /MISC/, as described in Appendix A.

Inputs

File of selected dots EXEC parameter &1 LIST

Outputs

File of selected dots EXEC parameter &1 &2

Storage Requirement

Not applicable.

Description

WRTRIG reads the selected dot file LIST and writes onto the output selected dot file the second and third words, which are the line and pixel number, respectively. Four characters of blanks are left as the first word of the new file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11 COMPARE PROGRAM

Purpose

COMPARE compares the original selected dots file with the updated selected dot file and prints a discrepancy report. It also outputs a file to be input to the proportion estimator program.

Linkages

COMPARE calls SETPID, READAI, IBSUM, REDLST, COMBLA, HEADII, GRDHED, GRDPIX, and BNI4A1.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, and /INFØ/ as described in Appendix A.

Inputs

File of selected dots	EXEC parameter &1 &2
File of control parameters	EXEC parameter &1 CC

Outputs

Table IB summary on printer file
Table II report on printer file

Storage Requirement

Not applicable.

Description

COMPARE outputs Table IB and Table II. It controls the calling of the initialization, the output of Table IB, the reading of the respective input files, and then the output of Table II according to grid. Table II contains dots which have a difference in line or pixel number between the two input lines or have a label missing on the updated selected dot file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.1 SOFTWARE COMPONENT NO. 1 (READAI)

Purpose

Subroutine READAI reads the data describing the selected pixels.

Linkages

READAI is called by COMPARE.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /INFO/, as described in Appendix A.

Inputs

File of selected dots EXEC parameter &1 &2

Outputs

None

Storage Requirement

Not applicable.

Description

READAI reads the file of selected dots into the matrix LBLDAT. It also reads and saves the beginning and ending address for each grid and the date for the last time the file was updated.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.2 SOFTWARE COMPONENT NO. 2 (IBSUM)

Purpose

Subroutine IBSUM writes the Table IB report.

Linkages

IBSUM is called by COMPARE. IBSUM calls HEADIB.

Interface

Interface is accomplished through common blocks /MISC/, /INFØ/, as described in Appendix A.

Inputs

None.

Outputs

Table IB summary report on printer file.

Storage Requirement

Not applicable.

Description

IBSUM writes the Table IB summary by calling the header subroutine HEADIB and then writing the needed information.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.3 SOFTWARE COMPONENT NO. 3 (HEADIB)

Purpose

Subroutine HEADIB writes the heading for the Table IB report.

Linkages

HEADIB is called by IBSUM.

Interface

Interface is accomplished through common blocks /MISC/ as described in Appendix A.

Inputs

None.

Outputs

Writes all heading information for Table IB on the printer file.

Storage Requirement

Not applicable.

Description

HEADIB writes the heading information and acquisition dates for the Table IB report.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.4 SOFTWARE COMPONENT NO. 4 (REDLIST)

Purpose

Subroutine RDLIST reads the original LIST file which describes the selected pixels and stores the information.

Linkages

RDLIST is called by COMPARE.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /INFØ/ as described in Appendix A.

Inputs

File of original selected dots EXEC parameter &1 LIST

Outputs

None.

Storage Requirement

Not applicable.

Description

REDLIST reads the original selected dots file LIST so that a combined file of current line/pixel designations and grid numbers may be built.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.5 SOFTWARE COMPONENT NO. 5 (COMBLA)

Purpose

Subroutine COMBLA writes a selected dot file with information from LIST and the current analyst file of dots.

Linkages

COMBLA is called by COMPARE.

Interface

Interface is accomplished through common blocks /LIST/, /MISC/, /INFØ/ as described in Appendix A.

Inputs

None.

Outputs

File of selected dots EXEC parameter &1 &2

Storage Requirement

Not applicable.

Description

COMBLA writes a file of selected dots. This combined file contains the first three words of the current selected dot file and the last two words of the LIST file. Words four and five are the cluster number and grid number, respectively.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.6 SOFTWARE COMPONENT NO. 6 (GRDHED)

Purpose

Subroutine GRDHED writes the site and date generated line for the Table II report.

Linkages

GRDHED is called by COMPARE.

Interface

Interface is accomplished through common block /MISC/ as described in Appendix A.

Inputs

None.

Outputs

Heading line for Table II report on printer file.

Storage Requirement

Not applicable.

Description

GRDHED writes the site and date generated heading on all pages of the Table II report, except the first page. This subroutine goes to a new page and increments the page counter.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.7 SOFTWARE COMPONENT NO. 7 (HEADII)

Purpose

Subroutine HEADII writes the heading information for the Table II report.

Linkages

HEADII is called by COMPARE.

Interface

Interface is accomplished through common block /MISC/ as described in Appendix A.

Inputs

None.

Outputs

Headings for Table II on printer file.

Storage Requirement

Not applicable.

Description

HEADII writes all headings and acquisition dates for the Table II report onto the printer file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.11.8 SOFTWARE COMPONENT NO. 8 (GRDPIX)

Purpose

Subroutine GRDPIX writes the grid heading for the Table II report.

Linkages

GRDPIX is called by COMPARE.

Interface

Interface is accomplished through calling arguments.

Inputs

Call GRDPIX (IWHGRD)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
IWHGRD	—	IN	Grid number

Outputs

Lines of heading for Table II report on printer file.

Storage Requirement

Not applicable.

Description

GRDPIX writes the grid number and the column headings for the Table II report onto the printer file.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.12 LIBRARY PROGRAMS

3.4.12.1 SOFTWARE COMPONENT NO. 1 (AFRMIN)

Purpose

Subroutine converts the alphabetic characters from integer input.

Linkages

AFRMIN calls BNI4A1.

Interface

Interface is accomplished through calling arguments.

Inputs

Call AFRMIN (INPUT, NOCHAR, IOUTPT).

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DESCRIPTION</u>
INPUT	—	IN	Integer data to be converted to alphabetic.
NOCHAR	—	IN	Number of characters to convert.
IOUTPT	—	OUT	Converted data.

Storage Requirement

Not applicable.

Description

AFRMIN converts input integer data to A format. The number of characters to convert is input and any leading zeros are converted to blanks.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.12.2 SOFTWARE COMPONENT NO. 2 (CALDOT)

Purpose

Subroutine CALDOT calculates the dot number for current dot.

Linkages

CALDOT calls BNI4A1.

Interface

Interface is accomplished through calling arguments.

Inputs

Call CALDOT (LINE, ISAMPL, IMODT).

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DESCRIPTION</u>
LINE	—	IN	Line number for current dot.
ISAMPL	—	IN	Sample number for current dot.
IMDOT	—	OUT	Dot number based on line and sample number in A format, left-justified.

Outputs

None.

Storage Requirement

Not applicable.

Description

CALDOT calculates the dot number for the current dot based on its line and sample number. The calculation is done only for line and samples that are modulo 10. The calculated dot number is then converted to A format, with leading zeros changed to blanks.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.12.3 SOFTWARE COMPONENT NO. 3 (PISRT)

Purpose

Sort one set of line numbers, samples, green numbers and brightness values.

Linkages

PISRT is a library routine.

Interface

Interface is accomplished through common blocks /BUFFER/, /LIST/, /INFO/ and /PLOT/ as described in Appendix A and calling arguments.

Inputs, Outputs

CALL PISRT(ITEMP, ISRTWH)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
ITEM	(999,6)	IN/OUT	Data to be sorted
ISRTWH		IN	Index to second dimension of ITEMP

Storage Requirement

Not applicable.

Description

PISRT sorts the data in matrix ITEMP. The subroutine preserves the previous sorts on the data.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.12.4 SOFTWARE COMPONENT NO. 4 (SETPID)

Purpose

Read and analyse the records describing the user specified information.

Linkages

SETPID is a library routine. SETPID calls NUMB and MOVSYN.

Interface

Interface is accomplished through common blocks /GROUPS/, /INFORM/, /MISC/, /RADIANT/ and /REQUIRE/ as described in Appendix A.

Inputs

(Segment number) CC EXEC parameter &1 CC A

Outputs

User supplied information written on printer file.

Storage Requirement

Not applicable.

Description

SETPID validates and saves the user specified information on the numbers of dots, channels, soil lines, acquisition dates, selected labels, date of report, segment number, analyst name, file name and "labelled or unlabelled switch" for plots.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.12.5 SOFTWARE COMPONENT NO. 5 (NUMB)

Purpose

NUMB moves free form numerical information to an array.

Linkages

NUMB is called by SETPID.

Interface

Interface is accomplished through calling arguments.

Inputs, Outputs

CALL NUMB(CARD, NUMVEC)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
CARD	80	IN	User defined record
NUMVEC		OUT	Array of numbers

Storage Requirement

Not applicable.

Description

NUMB moves the user defined numbers from a free form record to an array.

Flowchart

Not applicable.

Listing

See Appendix B for program.

3.4.12.6 SOFTWARE COMPONENT NO. 6 (MOVSYM)

Purpose

MOVSYM moves free form alphanumeric information to an array.

Linkages

MOVSYM is called by SETPID.

Interface

Interface is accomplished through calling arguments.

Inputs, Outputs

CALL MOVSYM(CARD, ITEMP, NAME)

<u>NAME</u>	<u>DIMENSION</u>	<u>IN/OUT</u>	<u>DEFINITION</u>
CARD	80	IN	User defined record
ITEMP	10	OUT	Array of alphanumeric information
NAME	---	OUT	Name of group symbol

Storage Requirement

Not applicable.

Description

MOVSYM moves the user defined names from a free form record to an array.

Flowchart

Not applicable.

Listing

See Appendix B for program.

4.0 OPERATION

4.1 OPERATING INSTRUCTIONS

CLUSTAPE, SELDOTS, GRBRDOTS, LISTDOT, LISTGRN, SCATTER, PLOT4, PLOT18, MULTIHIT, WRTRIG, COMPARE are operational on the IBM 3031 computer at LARS, West Lafayette, Indiana.

The programs, EXEC files and sample CC files can be loaded from tape, file

CLUSTAPE is executed by entering the following command after signing on the system:

CLUSTAPE (Segment Number), (Tape Number), (File Number).

Text output is on the terminal and line printer which are assigned in the EXEC, and the 1-channel tape file is on the tape and file designated in the execute statement. A disk file of the cluster values is created.

SELDOTS is executed by entering the following commands:

SELDOTS (Segment Number)

Text output is on the terminal and line printer which are assigned in the EXEC. Cluster values are read from the disk file created by CLUSTAPE, if proportional cluster distribution is selected. A file of selected dots is created.

GRBRTAPE is executed by entering the following commands:

GRBRTAPE (Segment Number), (Tape Number), (Tape File).

Text output is on the terminal and line printer which are assigned in the EXEC, and the multi-channel tape file is on the tape and file designated in the execute statement. A disk file of the radiance values is created.

LISTDOT, LISTGRN, SCATTER, PLOT4, PLOT18 and MULTIHIT are executing their respective EXEC file.

(Program Name), (Segment Number), (File Name)

Text output is on the terminal and line printer which are assigned in the EXEC. The file name designates (1) the list of selected dots created by SELDOTS (LIST) or (2) the list of selected dots created by WRTRIG, modified by the analyst and further processed by COMPARE.

COMPARE is executed by entering the following commands:

COMPARE (Segment Number), (File Name 1), (File Name 2)

Text output is on the terminal and line printer which are assigned in the EXEC. File name 1 is an input file of selected dots created by WRTRIG ... File name 2 is the output file of selected dots

4:2 EXEC FILES

4.2.1 CLUSTAPE EXEC A PURDUE / LARS 3031

```

&CONTROL OFF
&REMOTE F TO HOUSTON
&SPOOL E HOLD
&GETDISK JSC770 191 350 R B/A PASS AUGOIN
&CP DEL 181
&BEEP = 1
-GET GETDISK TEMP IM CLEAR DETACH
&IF &RETCODE EQ 0 &SKIP 7
&IF &BEEP LE 7 &SKIP 3
&TYPE NO 10 CYL TEMP DISK AVAILABLE
CP Q T
&EXIT
CP SLEEP 5 MIN
&BEEP = &BEEP + 1
&GOTO -GET
&GETDISK LARSYS
TAPMOUNT &2 TAP1 PD
&IF &INDEX NE 3 &SKIP 3
&IF &3 EQ 1 &SKIP 2
&SP = &3 - 1
TAPE FSP &SP
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (PERM
FILEDEF FT21F001 DISK &1 CC A (LRECL 80 HLKSIZE 80 PERM
FILEDEF FT09F001 DISK FILE FT09F001 A) (LRECL 320 HLKSIZE 320 PERM
FILEDEF FT11F001 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F002 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F003 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F004 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F005 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F006 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F007 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F008 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F009 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F010 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F011 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F012 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F013 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F014 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
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FILEDEF FT11F025 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F026 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F027 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F028 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F029 TAP1 (HLKSIZE 3060 RECFM U DEN 1600 PERM

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FILEDEF FT11F030 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F031 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F032 TAP1 (BLKSIZE 2060 RECFM U DEN 1600 PERM
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FILEDEF FT11F036 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
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FILEDEF FT11F050 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F051 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F052 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F053 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF 24 DISK &1 (CLUSTER 0) (RECL 200 BLKSIZE 400 XTENT 150 PERM
GLOBAL TXLIR FORTRAN CASLIR
LOAD CLUSTAPE (CLEAR START NOMAP
CP REMOTE F TO HOUSTON
CP SPOOL PRINTER HOLD CONT
PRINT &1 LISTING D
CP TAG QUE DEV F
L * * D (ALL

```

4.2.2 SELDOTS EXEC A PURDUE / LARS 3031

```
&CONTROL OFF
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (LRECL 133 BLKSIZE 133 XTENT 1500 PERM
FILEDEF 21 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM
FILEDEF 23 DISK &1 PROC2 A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT24F001 DISK &1 CLUSTER D (LRECL 200 BLKSIZE 800 XTENT 150 PER
FILEDEF FT27F001 DISK &1 LIST A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT30F001 DISK FILE FT30F001 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TXTLIN FORTRAN CM5LIN
LOAD SELDOTS (CLEAR START NOMAP
PRINT &1 LISTING D
CP TAG QUF DEV F
L * * D (ALL
```

4.2.3 GRRTAPE EXEC

A PURDUE / LARS 1031

```

&CONTROL OFF
REMOTE F TO HOUSTON
&SOL E HOLD
CP DET 181
GETDISK JSC770 191 350 R 4/A PASS AUCOIN
&HFFP = 1
-GET GETDISK TEMP 2M CLEAN DETACH
&IF &RFTCODE EQ 0 &SKIP 7
&IF &HFFP LE 7 &SKIP 3
&TYPE NO 10 CYL TEMP DISK AVAILABLE
CP Q T
&EXIT
CP SLEEP 5 MIN
&HFFP = &HFFP + 1
&GOTO -GET
TAPMOUNT &2 TAP1 NO
&IF &INDEX NE 3 &SKIP 3
&IF &3 EQ 1 &SKIP 2
&SP = &3 - 1
TAPE FSF &SP
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (PERM
FILEDEF FT21F001 DISK &1 CC A (LRECL 80 HLKSIZE 80 PERM
FILEDEF FT09F001 DISK FILE FT09F001 &1 (LRECL 320 HLKSIZE 320 PERM
FILEDEF FT11F001 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F002 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F003 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F004 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F005 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F006 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F007 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F008 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F009 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F010 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F011 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F012 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F013 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F014 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F015 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F016 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F017 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F018 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F019 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F020 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F021 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F022 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F023 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F024 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F025 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F026 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F027 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F028 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F029 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F030 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F031 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F032 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F033 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
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FILEDEF FT11F035 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F036 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F037 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F038 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F039 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F040 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F041 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F042 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F043 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F044 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM

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FILEDEF FT11F045 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F046 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F047 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F048 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F049 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F050 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F051 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F052 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT11F053 TAP1 (BLKSIZE 3060 RECFM U DEN 1600 PERM
FILEDEF FT25F001 DISK &1 RAD U (LRECL 2400 BLKSIZE 2400 XTENT 117 PERM
GLOBAL TXTLIB FORTRAN CMSLIB
LOAD GRRTAPE (CLEAR START NOMAP
PRINT &1 LISTING 0
CP DET 181

```

4.2.4 LISTDOT EXEC A PURDUE / LARS 3031

```
&CONTROL OFF
GETDISK JSC770 191 350 R R/A PASS AUCCOIN
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (LRECL 133 BLKSIZE 133 XTENT 1500 PERM
FILEDEF FT21F001 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT25F001 DISK &1 RAD D (LRECL 2400 BLKSIZE 2400 XTENT 117 PERM
FILEDEF FT29F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TXTL 9 FORTRAN CMSLIB
LOAD LISTDOT (CLEAR START NOMAP
PRINT &1 LISTING D
CP TAG QUE DEV F
L * * D (ALL
```

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4.2.5 LISTGRN EXEC A PURDUE / LARS 3031

```
&CONTROL OFF
GETDISK JSC770 191 350 R B/A PASS AUGOIN
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (LRECL 133 BLKSIZE 133 XTENT 1500 PERM
FILEDEF FT21F001 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT25F001 DISK &1 RAD D (LRECL 2400 BLKSIZE 2400 XTENT 117 PERM
FILEDEF FT29F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TXTLIB FORTRAN CMSLIB
LOAD LISTGRN (CLEAR START NOMAP
PRINT &1 LISTING D
CP TAG QUE DEV F
L * * D (ALL
```

4.2.6 MULTI HIT EXEC A PURDUE / LARS 3031

```
&CONTROL OFF
GETDISK JSC776 191 350 R H/A PASS AUCOIN
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (LRECL 133 BLKSIZE 133 XTENT 1500 PERM
FILEDEF FT21F001 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT25F001 DISK &1 RAD D (LRECL 2400 BLKSIZE 2400 XTENT 117 PERM
FILEDEF FT29F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TXTLIB FORTRAN CMSLIB
LOAD MULTI HIT (CLEAR START NOMAP
PRINT &1 LISTING D
CP TAG QUE DEF F
L * * D (ALI
```


4.2.7 SCATTER EXEC A PURDUE / IARS 3031

```
&CONTROL OFF  
FILEDEF 3 TERM (PERM  
FILEDEF 6 DISK &1 LISTING 0 (LRECL 133 BLKSIZE 133 XTENT 1500 PERM  
FILEDEF 21 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM  
FILEDEF 25 DISK &1 RAD 0 (LRECL 2400 BLKSIZE 2400 XTENT 117 PERM  
FILEDEF FT27F001 DISK &1 LIST A (LRECL 80 BLKSIZE 80 PERM  
FILEDEF FT29F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM  
FILEDEF FT30F001 DISK FILE FT30F001 A (LRECL 80 BLKSIZE 80 PERM  
GLOBAL TXTLIB FORTRAN CMSLIB  
LOAD SCATTER (CLEAR START NOMAP  
&TYPE PRINT &1 LISTING 0
```

4.2.8 PLOT4 FXFC A PURDUE / LARS 3031

```
&CONTROL OFF
GETDISK JSC770 191 350 R H/A PASS AUGOIN
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (LRECL 133 BLKSIZE 133 XTENT 1500 PERM
FILEDEF 21 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM
FILEDEF 25 DISK &1 RAD D (LRECL 2400 BLKSIZE 2400 XTENT 117 PERM
FILEDEF FT29F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT30F001 DISK FILE FT30F001 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TXLIB FORTRAN CMSLIB
LOAD PLOT4 (CLEAR START NDMAP
PRINT &1 LISTING D
```

4.2.9 PLOT18 EXEC A PURDUE / LARS 3031

```
&CONTROL OFF
GETDISK JSC770 191 350 R 8/A PASS AUCCOIN
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (LRECL 133 BLKSIZE 133 XTENT 1500 PERM
FILEDEF 21 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM
FILEDEF 25 DISK &1 PAD D (LRECL 2400 BLKSIZE 2400 XTENT 117 PERM
FILEDEF FT29F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT30F001 DISK FILE FT30F001 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TXTLIB FORTLAN CMSLIB
LOAD PLOT18 (CLEAR START NOMAP
PRINT &1 LISTING D
```

4.2.10 WRTRIG EXEC A PURDUE / LARS 3031

&CONTROL OFF
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (PERM
FILEDEF FT27F001 DISK &1 LIST A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT28F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TATLIB FORTRAN CMSLIB
LOAD WRTRIG (CLEAR START NOMAP
PRINT &1 LISTING D
CP TAG QUE DEV F

4.2.11 COMPARE EXEC A PURDUE / LARS 3031

```
&CONTROL OFF
GETDISK JSC770 191 350 R A PASS AUCOIN
FILEDEF 3 TERM (PERM
FILEDEF 6 DISK &1 LISTING D (LRECL 133 BLKSIZE 133 XTENT 1500 PERM
FILEDEF 21 DISK &1 CC A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT27F001 DISK &1 LIST A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT28F001 DISK &1 &2 A (LRECL 80 BLKSIZE 80 PERM
FILEDEF FT29F001 DISK &1 &3 A (LRECL 80 BLKSIZE 80 PERM
GLOBAL TXTLIB FORTRAN CMSLIB
LOAD COMPARE (CLEAR START NOMAP
PRINT &1 LISTING D
```

APPENDIX A
PIA SYSTEM FLOWCHART

CLUSTAPE

- ├── TAPHDR
- ├── LAREAD
- ├── FLDINT
- └── LINERD

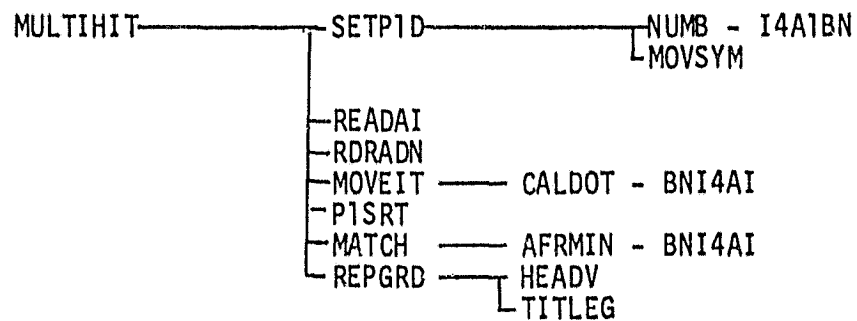
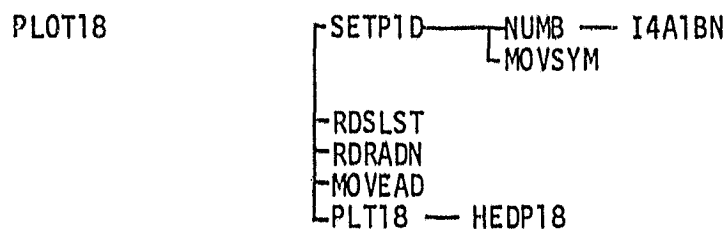
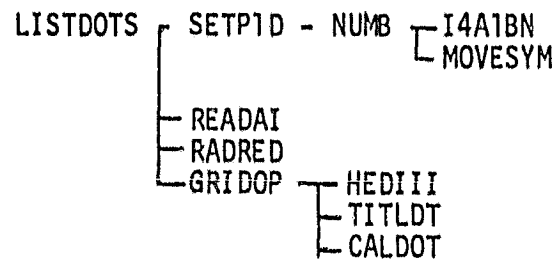
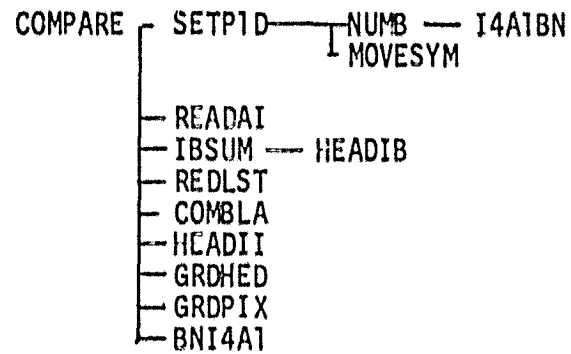
SELDOTS

- ├── SETPID
 - ├── NUMB ─── I4A1BN
 - └── MOVSYM
- ├── NRAND
- ├── RDSUMS
- ├── FIL209
- ├── FIL5X5
 - ├── UNIF
 - └── CKPUT
- ├── FIL105
 - ├── UNIF
 - └── CKPUT
- ├── FIL510
 - ├── UNIF
 - └── CKPUT
- ├── FILRAN
 - ├── UNIF
 - └── CKPUT
- └── WRTLST
 - ├── HEADTI
 - └── HEDTIA

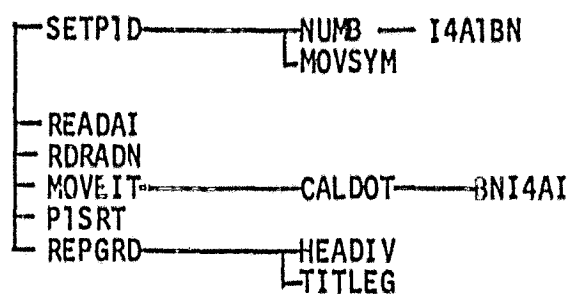
GRBRTAPE

- ├── NUMBER
- ├── TAPHDR
- ├── LAREAD
- ├── FLDINT
- └── LINERD

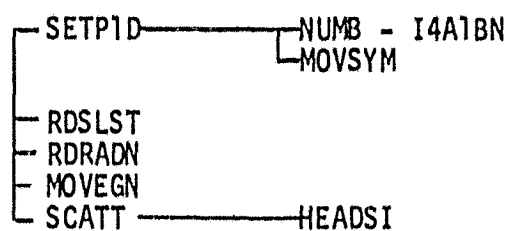
WRTRIG - WRTRIG



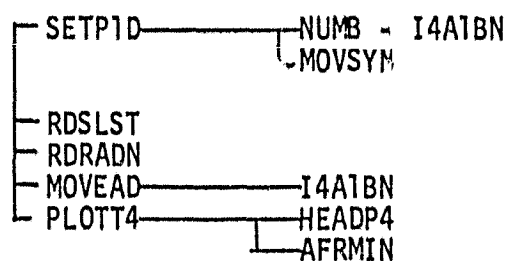
. LISTGRN -

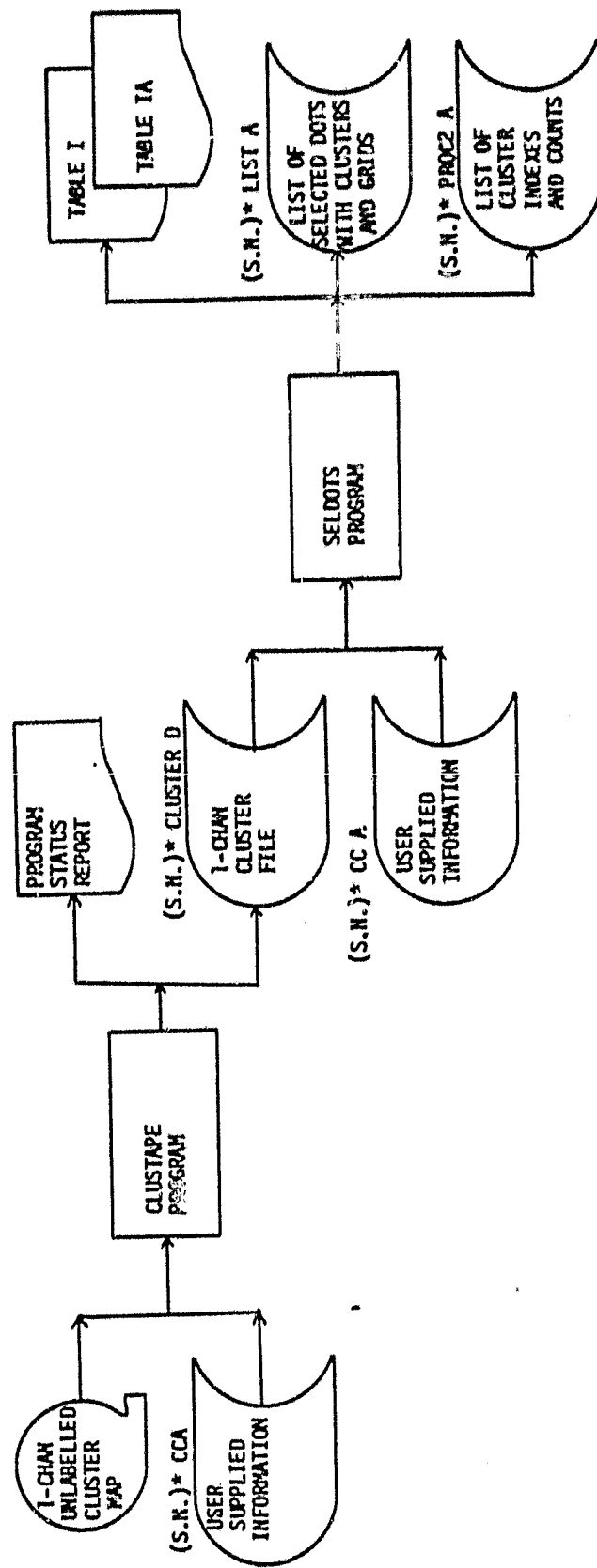


SCATTER -

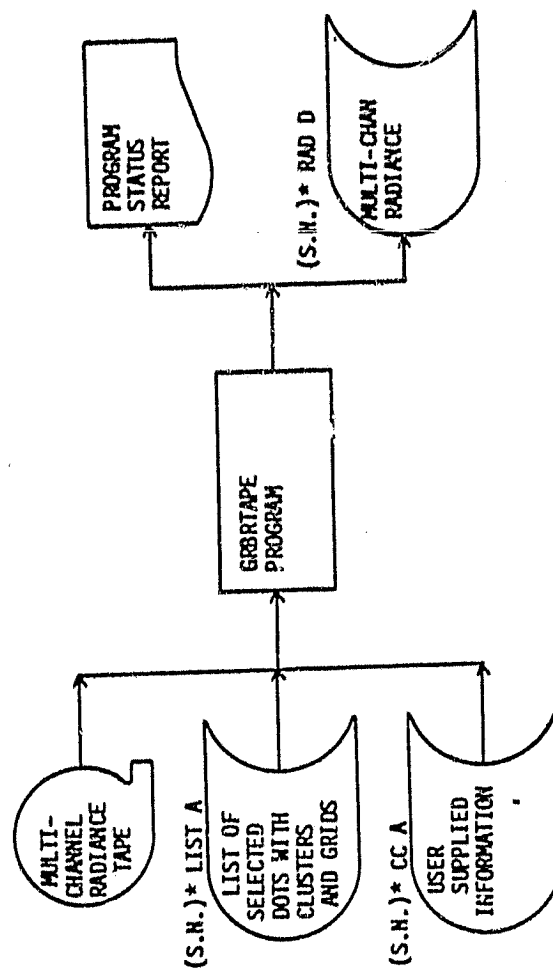


PLOT4 -

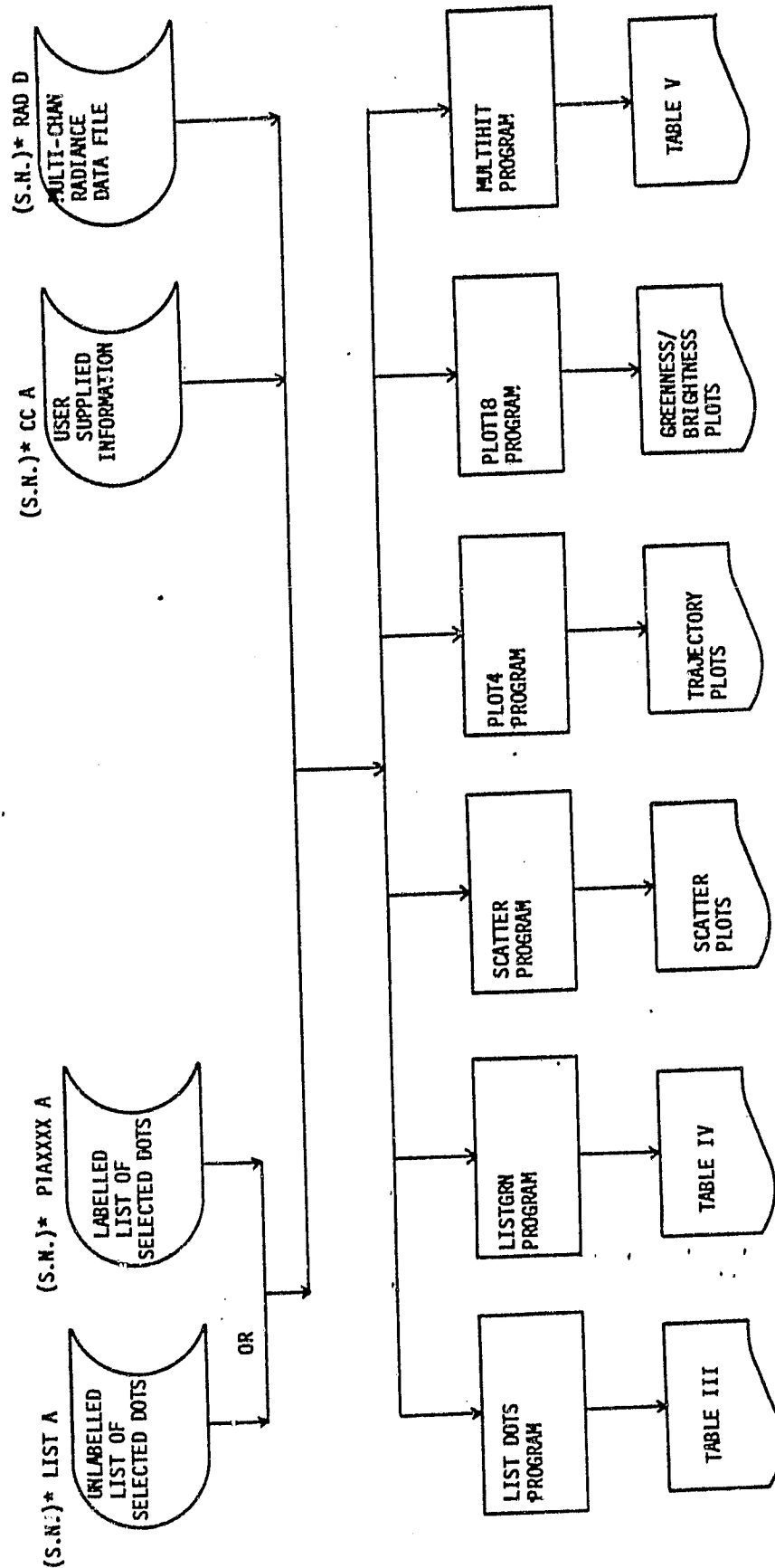


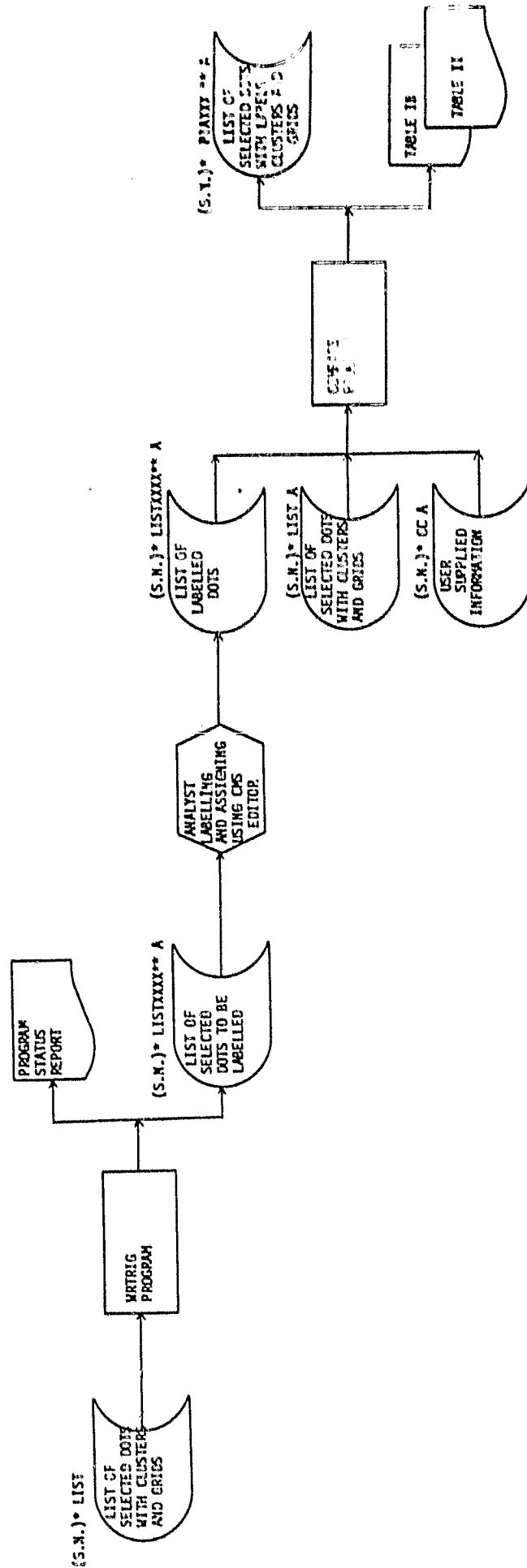


*(S.N.) = Segment Number



..*(S.N.) = Segment Number





APPENDIX B
PIA SYSTEM LISTINGS

FILE CLUSTAPE

PURDUE / LARS 3031

```

C PURPOSE: MOVE DATA FROM A UNIVERSAL FORMAT TAPE TO A TEMP DISK FILE
C ***** INPUT *****
C 1 CHANNEL TAPE IN UNIVERSAL FORMAT
C ***** OUTPUT *****
C FILE TO BE USED AS INPUT TO PROCESSOR 2
C FORMAT OF NEW FILE ON DISK 23 -- (SEGMENT NUMBER) SIZES
C REC 1 NUMBER OF CLUSTERS
C NOCLS
C REC 2 - 3 NUMBER OF DOTS REQUIRED FOR EACH CLUSTER
C ISUMCL
C FILE TO BE USED FOR REMAINDER OF PROGRAMS IN PROCESSOR 1
C FORMAT OF NEW FILE ON DISK 24 -- (SEGMENT NUMBER) CLUSTER
C REC 2 - 118 CLUSTER DATA (196 1 CHARACTER SYMBOLS)
C IDATA (INTEGER*4)
C REC 119 NO. CLUSTERS, SUM OF PIXELS, (NO. OF PTS FOR EACH CLUSTER,
C SYMBOLS REPRESENTING MAXIMUM OF 32 CLUSTERS
C NOCLS, JSUM, ISUMCL (INTEGER*4), ISMRLS (INTEGER*4)
C REC 120 INDICES REPRESENTING 1 CHAR SYMBOLS FOR 10 X 10 INTERSECTION
C IDOTCL(209)
C
C IMPLICIT INTEGER (A-Z)
C INTEGER*4 IDATA, ISMRLS, IRLANK, LHOLD, LKEEP
C DIMENSION IDOTCL(209), IDTSYM(209)
C DIMENSION ISUMCL(30), ISMRLS(32)
C DIMENSION FLDINF(6), FL(12)
C
C RESERVE SPACE FOR 196 PIXELS
C DIMENSION IDATA(200)
C
C COMMON /INFORM/HEAD(42), HAPTAP, DATAPE, SAVTAP, MAXFET,
C 1 PAGESIZ, TAPCHK, TRNSYM, TSTSYM, CLU00400
C 2 DIPSYM, THRSYM, MAXDIV, MINDIV, CLU00410
C 3 SFRIAL, TAPESV, FILESV, CLU00420
C 4 MAXCLS, NOCLS2, MAXFLD, NOFLD2, NOFLD3, CLU00430
C 5 NOTREF, NOFFAT, NOFET2, NOFET4, VARSIZ, CLU00440
C 6 VARSZ2, VARSZ4, XSIZ, NOSPEC, NOHIST, CLU00450
C 7 NOGRP, DIVSIZ, KEEPVL, PRILEV, YSIZ, CLU00460
C 8 XHGH, XLOW, SPCRAS, NOCLS3, PCTS7, CLU00470
C 9 IRLOCK(30), FETVEC(30), FETVC2(30), HISVEC(30), INVERT(30), BESTVC(30), CLU00480
C
C EQUIVALENC (FLDINF(1), LINSTR), (FLDINF(4), SAMSTR),
C (FLDINF(2), LINEND), (FLDINF(5), SAMEND),
C (FLDINF(3), LININC), (FLDINF(6), SAMINC)
C
C DIMENSION ARRAY(2000)
C 2000 LOCATIONS OF 'ARRAY' FOR FIELD DEFINITION INFORMATION.
C
C FIELD INFORMATION STORED AS FOLLOWS
C ARRAY(1) = FIRST FIELD NAME FOR THIS CLASS
C (2) = NO. OF VERTICES FOR THIS FIELD (NV)
C (3)-(3+NV*2) = ACTUAL VERTEX NUMBERS
C (3+NV*2) = TOTAL PIXELS IN THIS FIELD
C (4+NV*2)-(10+NV*2) = FLDINF BLOCK FOR THIS FIELD
C
C DIMENSION LHOLD(4), LKEEP(4)
C EQUIVALENC (IHOLD, LHOLD(4)), (KFEF, LKFEF(4))
C DATA ICHAN/'CHAN'/. IRLNK4/'', IFEND/'END'/. IRLANK /' '
C
C ***** 7FRO SUMS AND BLANKS SYMBOLS *****
C JSUM = 0
C DO 1 I = 1,30

```

CLU00010
 CLU00020
 CLU00030
 CLU00040
 CLU00050
 CLU00060
 CLU00070
 CLU00080
 CLU00090
 CLU00100
 CLU00110
 CLU00120
 CLU00130
 CLU00140
 CLU00150
 CLU00160
 CLU00170
 CLU00180
 CLU00190
 CLU00200
 CLU00210
 CLU00220
 CLU00230
 CLU00240
 CLU00250
 CLU00260
 CLU00270
 CLU00280
 CLU00290
 CLU00300
 CLU00310
 CLU00320
 CLU00330
 CLU00340
 CLU00350
 CLU00360
 CLU00370
 CLU00380
 CLU00390
 CLU00400
 CLU00410
 CLU00420
 CLU00430
 CLU00440
 CLU00450
 CLU00460
 CLU00470
 CLU00480
 CLU00490
 CLU00500
 CLU00510
 CLU00520
 CLU00530
 CLU00540
 CLU00550
 CLU00560
 CLU00570
 CLU00580
 CLU00590
 CLU00600
 CLU00610
 CLU00620
 CLU00630
 CLU00640
 CLU00650
 CLU00660
 CLU00670
 CLU00680
 CLU00690
 CLU00700
 CLU00710

FILE CLUSTAPE

PURDUE / LARS 3031

```

0015      ISUMCL(I) = 0
0016      ISMBLS(I) = IRLANK
0017      IHOLD = IRLNKA
0018      KFFP = IRLNKA
0019      NXLCLS = 1
C
C ***** READ DATA FROM 1 CHANNEL TAPE *****
C SKIP DATA IN CC FILE EXCEPT FOR CHANNELS CARD
5      READ (21,6) (IDATA(I),I=1,20)
6      FORMAT (20A4)
      IF (IDATA(1) .NE. IEND) GO TO 5
      FETVFC(1) = 1
      NOFFAT = 1
C
0025      DATAPF = 11
0026      NOFSKP = 0
0027      CALL TAPHDR(DATAPE,NOFSKP)
C
0028      NOFLD=0
0029      IPT=1
C*
C READ (1) FIELD NAME, (2) FIELD VERTICES, (3) FIELD INFORMATION
C (4) NUMBER VERTICES, AND RETURN (5) NUMBER OF CARDS READ
20      ICK = LAREAD(ARRAY(IPT),ARRAY(IPT+2),FLDINF,ARRAY(IPT+1), NOCRDS)
      NV=ARRAY(IPT+1)
      NOFLD=NOFLD+1
      NSAMP=(SAHFND-SAMSTR)/SAMINC+1
      IR=IPT+2
      IE=IR+NV*2-1
      WRITE (6,1600) NOFLD,ARRAY(IPT),NV,SAMINC,LININC,
      * (ARRAY(I),I=IR,IE)
0037      1600 FORMAT(1X,I2,4X,A4,12X,I2,10X,I2,6X,I2,5X,
      * 5('(',I4,',',I4,',',2X)/2(52X,5('(',I4,',',I4,',',2X)/1)
C*
0038      NOVALS = 196
C
C* POSITION TAPE FOR THIS FIELD
0039      FETVFC(1) = 1
0040      CALL FLDINT(FLDINF,FETVEC,NOFEAT)
C
C ***** DEFINE FILE TO BE 150 RECORDS, OF 200 WORDS EACH *****
0041      DEFINE FILE 24 (150, 200, U, ID)
C
C *** READ LINES OF DATA FROM UNIVERSAL FORMAT TAPE AND MOVE TO DISK ***
0042      NXTDOT = 1
0043      NXTCLS = 1
C
0044      DO 70 LINE=LINSTR,LINEND,LININC
0045      LINENO = LINE
C
C READ LINE FROM UNIVERSAL FORMAT TAPE (ENDTAP = -1 IF LAST LINE)
0046      CALL LINRD(IDATA,FNDTAP)
0047      IF (ENDTAP.FQ.-1) GO TO 800
C
C WRITE LINE ON TEMP DISK FILE
0048      WRITE (24,LINENO) LINENO, (IDATA(I),I=1,NOVALS)
C
C SUM OCCURANCES OF CLUSTERS
C
29      DO 40 II = 1,196
      DO 30 JJ = 1,NXTCLS
      IF (IDATA(II) .NE. ISMBLS(JJ)) GO TO 30
      ISUMCL(JJ) = ISUMCL(JJ) + 1
      NDEX = JJ
      GO TO 35
30      CONTINUE
C NEW CLUSTER ADD 1 TO COUNT, AND START NEW SUM
      ISMBLS(NXTCLS) = IDATA(II)
      WRITE (6,44) LINENO, II, NXTCLS, ISMBLS(NXTCLS), IDATA(II)
0056      44 FORMAT(1X,LINENO, II, NXTCLS, ISMBLS(NXTCLS), IDATA(II)=1,5I6)
0057
0058

```

CLU00720
 CLU00730
 CLU00740
 CLU00750
 CLU00760
 CLU00770
 CLU00780
 CLU00790
 CLU00800
 CLU00810
 CLU00820
 CLU00830
 CLU00840
 CLU00850
 CLU00860
 CLU00870
 CLU00880
 CLU00890
 CLU00900
 CLU00910
 CLU00920
 CLU00930
 CLU00940
 CLU00950
 CLU00960
 CLU00970
 CLU00980
 CLU00990
 CLU01000
 CLU01010
 CLU01020
 CLU01030
 CLU01040
 CLU01050
 CLU01060
 CLU01070
 CLU01080
 CLU01090
 CLU01100
 CLU01110
 CLU01120
 CLU01130
 CLU01140
 CLU01150
 CLU01160
 CLU01170
 CLU01180
 CLU01190
 CLU01200
 CLU01210
 CLU01220
 CLU01230
 CLU01240
 CLU01250
 CLU01260
 CLU01270
 CLU01280
 CLU01290
 CLU01300
 CLU01310
 CLU01320
 CLU01330
 CLU01340
 CLU01350
 CLU01360
 CLU01370
 CLU01380
 CLU01390
 CLU01400
 CLU01410
 CLU01420

ORIGINAL PAGE IS
 OF POOR QUALITY

FILE CLUSTAPE

PURDUE / LARS 3031

```

0059      ISUMCL(NXTCLS) = 1
0060      NDFX = NXTCLS
0061      NXTCLS = NXTCLS + 1
0062      C
0063      C 35 CONTINUE
0064      C IF THE LINE AND SAMPLE ARE MULTIPLES OF 10 SAVE DOT INDEX
0065      IF (MOD(LINENO,10) .NE. 0) GO TO 40
0066      IF (MOD(II,10) .NE. 0) GO TO 40
0067      IDOTCL(NXTDOT) = NDFX
0068      IDTSYM(NXTDOT) = IDATA(II)
0069      NXTDOT = NXTDOT + 1
0070      C 40 CONTINUE
0071      C ***** END OF LINES OF DATA *****
0072      C SAVE DOTS FOR 19.11 GRID
0073      IADRES = 120
0074      WRITE (24,IADRES) (IDOTCL(I),I=1,209)
0075      WRITE (6,72) (IDOTCL(I),I=1,209)
0076      72 FORMAT (//,' INDICES FOR 10 X 10 GRID DOTS = ',/, (1X,19I3))
0077      WRITE (6,74) (IDTSYM(I),I=1,209)
0078      74 FORMAT (//,' SYMBOLS FOR DOTS = ',/, (1X,19I3))
0079      C
0080      C WRITE MESSAGE TO USER
0081      WRITE (3,75) LINENO
0082      75 FORMAT (//,' IMAGE DATA EXTRACTED FROM TAPE, LAST LINE = ',I4)
0083      C
0084      NOCLS = NXTCLS - 1
0085      DO 80 I = 1,NOCLS
0086      JSUM = JSUM + ISUMCL(I)
0087      C
0088      80 WRITE (6,100) NOCLS, JSUM
0089      100 FORMAT (//,' I3, ' CLASSY CLUSTERS', 16,' PIXELS')
0090      C
0091      IADRES = 119
0092      WRITE (24,IADRES) NOCLS, JSUM, (ISUMCL(I),I=1,NOCLS), (ISWRLS(I),I=1,NOCLS)
0093      1 = 1,NOCLS)
0094      C
0095      C WRITE FILE FOR PIR PROGRAMS
0096      WRITE (23,2000) NOCLS
0097      2000 FORMAT (20I4)
0098      WRITE (23,2000) (ISUMCL(I),I=1,NOCLS)
0099      C
0100      WRITE (6,199)
0101      199 FORMAT (//,' SYMPOI SUM')
0102      WRITE (6,200) (ISWRLS(I), ISUMCL(I), I=1,NOCLS)
0103      200 FORMAT (2I6)
0104      WRITE (6,200) (ISUMCL(I),I=1,NOCLS)
0105      RETURN
0106      C
0107      800 WRITE (6,1400)
0108      1400 FORMAT(' END-OF-TAPE REACHED BEFORE END OF FIELD')
0109      STOP
0110      C
0111      1300 FORMAT(' FIELD DEFINITION INFORMATION EXCEEDS 2000 WORDS')
0112      C
0113      END

```

```

CLU01430
CLU01440
CLU01450
CLU01460
CLU01470
CLU01480
CLU01490
CLU01500
CLU01510
CLU01520
CLU01530
CLU01540
CLU01550
CLU01560
CLU01570
CLU01580
CLU01590
CLU01600
CLU01610
CLU01620
CLU01630
CLU01640
CLU01650
CLU01660
CLU01670
CLU01680
CLU01690
CLU01700
CLU01710
CLU01720
CLU01730
CLU01740
CLU01750
CLU01760
CLU01770
CLU01780
CLU01790
CLU01800
CLU01810
CLU01820
CLU01830
CLU01840
CLU01850
CLU01860
CLU01870
CLU01880
CLU01890
CLU01900
CLU01910
CLU01920
CLU01930
CLU01940
CLU01950
CLU01960
CLU01970
CLU01980
CLU01990
CLU02000
CLU02010
CLU02020

```

FILE CLUSTAPE

PURDUE / LARS 3031

COMMON BLOCK /INFORM / MAP SIZE 41C							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
MFAD	0	MAPTAP	AP	DATAPE	AC	SAVTAP	80
PAGSIZ	88	TAPCHK	RC	TPNSYM	CO	TSTSYM	C4
THRSYM	CC	MAXDIV	D0	MINDIV	D4	SPLMAX	D8
TAPFSV	F0	FILESV	F4	MAXCLS	F8	NOCLS2	EC
NOFLD2	F4	NOFLD3	F8	NOTRFD	FC	NOFEAT	100
NOFFTA	108	VARSIZ	10C	VARSZ2	110	VARSZ4	114
NOSPEC	11C	NOHIST	120	NOGRP	124	DIVSIZ	128
PRTLTV	130	YSIZ	134	XHGH	138	XLOW	13C
NOCLSI	144	PCT57	148	IBLOCK	14C	FETVEC	1C4
HISVEC	284	INVERT	32C	RESTVC	344		
SURPROGRMS CALLED							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IRCONW	114	TAPHDR	118	LAREAD	11C	FLOINT	120
LINERN	128					OIOCSN	124
EQUIVALENCE DATA MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
FLDINF	170	LINSTR	170	LINEND	174	LININC	178
SAWFND	180	SAWINC	184	LHOLD	188	IHOLD	194
KFFP	1A4						
SCALAR MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
ICHAN	1A8	IBLNK4	1AC	IFND	180	IBLANK	184
I	1RC	NXLCLS	1C0	NOFSKP	1C4	NOFLD	1C8
ICK	1D0	NOCPDS	1D4	NV	1D8	NSAMP	1C
IF	1E4	NOVALS	1E8	ID	1FC	NXTDOT	1F0
LINF	1FR	LINFNO	1FC	ENDTAP	200	II	204
NOFX	20C	IADRES	210	NOCLS	214		
ARRAY MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IDOTCL	218	IDTSYM	55C	ISUMCL	840	ISMBLS	918
IDATA	9C8	ARRAY	CF8			FL	998
FORMAT STATEMENT MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
6	2C28	1600	2C2F	44	2C71	72	2CAB
75	2CFC	100	2D31	2000	2D55	199	2D58
1400	2D76	1300	2DA2				

OPTIONS IN EFFECT ID=ERCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = CLUSTAPE, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 98, PROGRAM SIZE = 13736
 STATISTICS NO DIAGNOSTICS GENERATED

```

C PURPOSE: MAKE LIST OF PIXELS TO BE EVALUATED BY AI'S
C ***** INPUT *****
C FORMAT OF CLUSTER DATA FILE ON DISK 24 -- (SEGMENT NUMBER) CLUSTER
C REC 1 - 117 CLUSTER DATA (196 INDICES TO CLUSTER SYMBOLS)
C IDATA
C REC 119 NO. CLUSTERS, SUM OF PIXELS, (NO. OF PTS FOR EACH CLUSTER,
C INDICES TO SYMBOLS REPRESENTING MAXIMUM OF 30 CLUSTERS
C NOCLS, JSUM, ISUMCL, ISMRLS
C REC 120 INDICES REPRESENTING 1 CHAR SYMBOLS FOR 10 X 10 INTERSECTION
C IDOTCL(209)
C ***** OUTPUT *****
C FORMAT OF NEW FILES ON UNIT
C 1-AI LABELS, 2-LINE NUMBER, 3-SAMPLE, 4-CLUSTER INDEX,
C 5-GRID TYPE
C LIST(999,5) 1-BLANKS, 2-LINE NO., 3-SAMPLE, 4-CLUS INDEX, 5-GRID
C FORMAT OF OUTPUT LIST FOR ANALYST
C SPACE FOR NEW DATA, LINE NUMBER, SAMPLE
C LIST(999,5) 2-LINE NO, 3-SAMPLE
C DESCRIPTION OF VARIABLES
C VARIABLES READ FROM FILE 24 CREATED BY PIA 1CHAN
C ISMRLS--SYMBOL FOR EACH CLUSTER
C ISUMCL--SUM FOR EACH CLUSTER
C IDOTSCL--INDEX TO CLUSTER FOR 11 X 19 DOT
C CLSUM--READ AS JSUM, TOTAL NUMBER OF POINTS (117 * 196)
C USER SUPPLIED
C NODOTS--NUMBER OF DOTS NEEDED FOR LIST
C BUFFER
C IDATA--LINE OF DATA (196 PIXELS)
C CALCULATED VARIABLES
C PRCNT--PERCENT FOR EACH CLUSTER
C MTOTAL--CURRENT NUMBER OF PIXELS SATISFYING USER REQ'D NUM PTS
C LTOTAL--CURRENT NUMBER OF PIXELS IN LIST
C LINFNO--CURRENT LINE NUMBER
C KOLUMN--CURRENT SAMPLE NUMBER
C NEEDCL--NUMBER NEEDED FOR EACH CLUSTER (PRCNT*NODOTS)
C NEEDGR--NUMBER NEEDED FOR GROUP OF CLUSTERS WITH NEEDCL = 0
C NOLAST--LAST PIXEL INDEX ON LAST NON-NULL GRID
C
C COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMRLS(90), PRCNT(90),
C 1 IDOTCL(212), IUSED(117,196), INDEXC(90), INDEX2, ITOT2
C LOGICAL*1 IUSED
C
C COMMON /REQUIP/ MTOTAL, NODOTS, MATCHS(90), IDATA(196), LINFNO, KOLUMN
C
C COMMON /LISTRO/ LTOTAL, LGRID, LIST(999,5), NEEDCL(90), NEEDGR, NOLAST
C
C COMMON /MISC/ NOACO, LNSOIL(6), IACQDT(2,6), AI(5), NMFILE(2),
C 1 SEGM, DATE(4), IGRID(5), IGRIDN(5), NOPGFS, NOLNES
C
C DATA IBLANK/' '
C
C CALL SETP1 TO READ CC FILE
C CALL SFTPID
C
C SFT PIXELS USED MATRIX .FALSE., PIXEL SFT TO .TRUE. WHEN IT IS USED
C DO 5 I = 1,196
C DO 5 J = 1,117
C IUSED(J,I) = .FALSE.
C
C BLANK AND ZERO LIST

```

SEL00010
SEL00020
SEL00030
SEL00040
SEL00050
SEL00060
SEL00070
SEL00080
SEL00090
SEL00100
SEL00110
SEL00120
SEL00130
SEL00140
SEL00150
SEL00160
SEL00170
SEL00180
SEL00190
SEL00200
SEL00210
SEL00220
SEL00230
SEL00240
SEL00250
SEL00260
SEL00270
SEL00280
SEL00290
SEL00300
SEL00310
SEL00320
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SEL00340
SEL00350
SEL00360
SEL00370
SEL00380
SEL00390
SEL00400
SEL00410
SEL00420
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SEL00480
SEL00490
SEL00500
SEL00510
SEL00520
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SEL00590
SEL00600
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SEL00630
SEL00640
SEL00650
SEL00660
SEL00670
SEL00680
SEL00690
SEL00700
SEL00710

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C

124

FILE SELDOTS

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0011	NO 7 I = 1.999	SEL00720
0012	LIST(I,1) = IRLANK	SEL00730
0013	LIST(I,2) = 0	SEL00740
0014	LIST(I,3) = 0	SEL00750
0015	LIST(I,4) = 0	SEL00760
0016	LIST(I,5) = 0	SEL00770
	7	SEL00780
	C	SEL00790
	C ZERO COUNT OF DOTS FOUND	SEL00800
0017	LTOTAL = 0	SFL00810
0018	MTOTAL = 0	SEL00820
0019	NOLAST = 0	SFL00830
	C	SFL00840
	C ZERO MATCHES FOR EACH CLUSTER	SEL00850
0020	NO 10 I = 1.30	SFL00860
0021	MATCHS(I) = 0	SFL00870
	10	SEL00880
	C	SFL00890
	C IF (NODOTS .LE. 3) GO TO 150	SFL00900
0022		SEL00910
	C	SFL00920
	C INITIALIZE NRAND	SFL00930
0023	CALL NRAND(1.)	SFL00940
0024	CALL RDSUMS	SFL00950
	C	SEL00960
	C FILL LIST FROM 200 DOTS, UNLESS GRID 2 SPECIFIED	SEL00970
0025	150 IF (NODOTS .EQ. 2) GO TO 160	SFL00980
0026	CALL FIL200	SEL00990
0027	IF (NODOTS .EQ. 3) GO TO 140	SFL01000
0028	IF (MTOTAL .GE. NODOTS) GO TO 200	SFL01010
	C	SFL01020
	C FILL LIST FROM 5 X 5 GRID AT RANDOM	SFL01030
0029	160 CALL FIL5X5	SFL01040
0030	IF (MTOTAL .GE. NODOTS) GO TO 200	SEL01050
	C	SFL01060
	C FILL LIST FROM 10 X 5 GRID AT RANDOM	SFL01070
0031	CALL FIL105	SEL01080
0032	IF (MTOTAL .GE. NODOTS) GO TO 200	SEL01090
	C	SEL01100
	C FILL LIST FROM 5 X 10 GRID AT RANDOM	SEL01110
0033	CALL FIL510	SFL01120
0034	IF (MTOTAL .GE. NODOTS) GO TO 200	SEL01130
	C	SFL01140
	C FILL LIST FROM COMPLETE GRID AT RANDOM	SEL01150
0035	CALL FILRAN	SFL01160
	C	SEL01170
	C WRITE LIST FOR AI AND LIST TO DISK	SEL01180
0036	200 CALL WRTLIST	SEL01190
	C	SEL01200
0037	STOP	
0038	END	

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FILE SELDOTS

SELDOTS DATE = 80157
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SYMBOL NOCLS TNOTCL	LOCATION 0 440	COMMON BLOCK /CLSTR / MAP SIZE 6294 SYMBOL LOCATION CLSUM 4 TUSED 700	SYMBOL LOCATION ISUMCL 8 INDEXC 6124	SYMBOL LOCATION ISMBS 170 NDFX2 62AC	SYMBOL LOCATION PRCENT 208 ITOT2 6290
SYMBOL MTOTAL KOLIMH	LOCATION 0 484	COMMON BLOCK /REQUIR / MAP SIZE 488 SYMBOL LOCATION NODOTS 4	SYMBOL LOCATION MATCHS 8	SYMBOL LOCATION IDATA 170	SYMBOL LOCATION LINENO 480
SYMBOL LTOTAL NOLAST	LOCATION 0 4F80	COMMON BLOCK /LISTRO / MAP SIZE 4F84 SYMBOL LOCATION LGRID 4	SYMBOL LOCATION LIST 8	SYMBOL LOCATION NEEDCL 4F14	SYMBOL LOCATION NEEDGR 4F7C
SYMBOL NOACQ SFGH NOLNES	LOCATION 0 68 AB	COMMON BLOCK /MISC / MAP SIZE AC SYMBOL LOCATION LNSOIL 4 DATE 6C	SYMBOL LOCATION IACQDT 1C IGRIDR 7C	SYMBOL LOCATION AI 4C IGRIDN 90	SYMBOL LOCATION NMFILE 60 NOPGES 44
SYMBOL SFTP1D FIL105	LOCATION FC 100	SURPROGRAMS CALLED SYMBOL LOCATION NRAND F0 FIL510 104	SYMBOL LOCATION RDSUMS F4 FILRAN 108	SYMBOL LOCATION FIL209 FR WRTLST 10C	SYMBOL LOCATION FIL5X5 FC IRCOM4 110
SYMBOL TBLANK	LOCATION 118	SYMBOL SCALAR MAP I LOCATION 11C	SYMBOL LOCATION J 120	SYMBOL LOCATION	SYMBOL LOCATION

OPTIONS IN EFFECT ID,ERCDIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = SELDOTS, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 39, PROGRAM SIZE = 928
 STATISTICS NO DIAGNOSTICS GENERATED

FILE SELDOTS

PURDUE / LARS 3031

0001

SUBROUTINE RDSUMS

PURPOSE: (1) READ COUNTS OF POINTS IN EACH CLUSTER AND THEIR
ASSOCIATED SYMBOLS
(2) CALCULATE TOTAL NUMBER OF POINTS

***** INPUT *****
NNDOTS NUMBER OF DOTS NEEDED
1 CHANNEL CLUSTER DATA ON UNIT 24

***** OUTPUT *****
NEEDCL NUMBER DOTS NEEDED FOR EACH CLUSTER
PERCENT PERCENT NEEDED FOR EACH CLUSTER
ISMCLS SYMBOLS FOR EACH CLUSTER
ISUMCL NUMBER OF DOTS FOR EACH CLUSTER
INDEX2 INDEX FOR EACH ACTIVE CLUSTER, CLUSTER .LE. 2 RESET TO 1ST
ITOT2 TOTAL NUMBER OF PIXELS IN GROUP OF CLUSTER .LE. 2

0002

***** COMMON BLOCKS *****
COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMCLS(90), PERCENT(90),
1 IDOTCL(212), IUSED(117,196), INDEXC(90), INDEX2, ITOT2
LOGICAL *1 IUSED

0003

0004

COMMON/LISTR/LTOTAL, LGRID, LIST(999,5), NEEDCL(90), NEEDGR, NOLAST

0005

0006

COMMON/REQUIR/MTOTAL, NNDOTS, MATCHS(90), IDATA(196), LINENO, KOLUMN
COMMON /MISC/ NDOCO, LNSOIL(6), IACDOT(2,6), AI(5), NHFILE(2),
1 SEGM, DATE(4), IGRIDR(5), IGRIDN(5), NOPGES, NOLNES

0007

***** DEFINE 1 CHANNEL FILE AS UNIT 24 *****
DEFINE FILE 24 (150, 200, U, IO)

***** READ INFORMATION FROM CLUSTAPE *****

0008

0009

0010

0011

READ ORIGINAL CLASSY CLUSTER FOR EACH OF 209 POINTS

IADRES = 120
READ(24, IADRES) (IDOTCL(I), I=1, 209)
WRITE(6, 15) (IDOTCL(I), I=1, 209)
FOPMAT (' INDICES FOR 10 X 10 GRID DOTS= ', /, (1X, 1913))

0012

0013

READ NUMBER CLASSES, SUM ALL POINTS, SYMBOLS AND SUM POINTS IN CLASSES

IADRES = 110
READ(24, IADRES) NOCLS, JSUM, (ISUMCL(I), I=1, NOCLS), (ISMCLS(I), I=1, NOCLS)

0014

0015

WRITE(6, 40) NOCLS, JSUM
FORMAT (' //, I3, ' CLASSY CLUSTERS', 18, ' PIXELS')

***** CALCULATE PERCENTAGES *****

0016

0017

0018

0019

0020

0021

0022

INDEX2 = 0
DO 50 I = 1, 30
INDEXC(I) = I
CLSUM = JSUM
DO 60 I = 1, NOCLS
PERCENT(I) = ISUMCL(I) / CLSUM
CONTINUE

***** ADJUST PERCENTAGES *****
CALCULATE NUMBER NEEDED FOR EACH CLUSTER, SUM ALL PERCENTAGES NEEDED,
SUM PERCENTAGES NEEDED FOR CLUSTERS WITH ZERO NEEDED, LARGEST CLUSTER

0023

0024

0025

0026

ISUM = 0
IRIG = 0
NDXRIG = 0
PERCENT0 = 0

0027

0028

0029

0030

INDEX2 = 0
DO 120 I = 1, NOCLS
NEEDCL(I) = PERCENT(I) * NNDOTS + .5
IF (NEEDCL(I) .GT. 2) GO TO 100

SFL01210
SEL01220
SEL01230
SEL01240
SEL01250
SEL01260
SEL01270
SEL01280
SEL01290
SEL01300
SEL01310
SEL01320
SEL01330
SEL01340
SEL01350
SEL01360
SEL01370
SEL01380
SEL01390
SEL01400
SEL01410
SEL01420
SEL01430
SEL01440
SEL01450
SEL01460
SEL01470
SEL01480
SEL01490
SEL01500
SEL01510
SEL01520
SEL01530
SEL01540
SEL01550
SEL01560
SEL01570
SEL01580
SEL01590
SEL01600
SEL01610
SEL01620
SEL01630
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SEL01680
SEL01690
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SEL01780
SEL01790
SEL01800
SEL01810
SEL01820
SEL01830
SEL01840
SEL01850
SEL01860
SEL01870
SEL01880
SEL01890
SEL01900
SEL01910

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```

0031      PRCNT0 = PRCNT0 + PRCENT(I)
0032      NFEEDCL(I) = 0.
0033      IF (NDEX2 .EQ. 0) NDEX2 = I
0034      INDEXC(I) = NDEX2
C
0035      100  ISUM = ISUM + NEEDCL(I)
C
C   SAVE VALUE AND INDEX OF LARGEST CLUSTER
0036      IF (NFEEDCL(I) .LT. IIRIG) GO TO 120
0037      IIRIG = NFEEDCL(I)
0038      NDXIRIG = I
C
0039      120  CONTINUE
C
C   CHECK SUM OF ZERO CLUSTERS
0040      NFEEDGR = PRCNT0 * NODOTS + .5
0041      ITOT2 = NFEEDGR
0042      ISUM = ISUM + NFEEDGR
C
0043      IDIFF = NODOTS - ISUM
0044      WRITE (6,130) IDIFF, NDXIRIG, NFEEDCL(NDXIRIG)
0045      130  FORMAT (14,' POINTS ADDED TO CLUSTER ',I2,' ORIGINAL SIZE WAS',I4)
C   ADJUST LARGEST CLUSTER BY DIFFERENCE AND TOTAL IN SUM
0046      NFEEDCL(NDXIRIG) = NFEEDCL(NDXIRIG) + (NODOTS - ISUM)
C
C   ***** WRITE MESSAGES *****
0047      WRITE (6,199)
0048      199  FORMAT (1/,' SYMBOL COUNT PERCENT NUM REQ INDEX')
0049      WRITE(6,200) (ISMBLS(I),ISUMCL(I),PRCENT(I),NEEDCL(I),I,I=1,NOCLS)
0050      200  FORMAT (2I7,2X,F6.3,2I8)
C
C   WRITE SUM NEEDED FOR ZERO GROUP
0051      WRITE (6,300) NFEEDGR
0052      300  FORMAT (1/,' NUMBER NEEDED FOR ZERO CLUSTERS = ',I3)
0053      RETURN
0054      END

```

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RDSUMS

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FILE SELOOTS

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SYMBOL NORLS TNOTCL	LOCATION 0 440	COMMON BLOCK /CLSTR LOCATION 4 790	SYMBOL ISUMCL INDFXC	MAP LOCATION 8 6124	SIZE 6294	SYMBOL ISMBLS NDEX2	LOCATION 170 62AC	SYMBOL PRCENT ITOT2	LOCATION 208 6290
SYMBOL LTOTAL NDI AST	LOCATION 0 4F80	COMMON BLOCK /LISTRO LOCATION 4	SYMBOL LIST	MAP LOCATION 8	SIZE 4F84	SYMBOL NEEDCL	LOCATION 4F14	SYMBOL NEEDSR	LOCATION 4F7C
SYMBOL MTOTAL KOLIMN	LOCATION 0 484	COMMON BLOCK /PEQUIR LOCATION 4	SYMBOL MATCHS	MAP LOCATION 8	SIZE 488	SYMBOL IDATA	LOCATION 170	SYMBOL LINENO	LOCATION 483
SYMBOL NOACO SFGN NDI NES	LOCATION 0 68 A8	COMMON BLOCK /MISC LOCATION 4 AC	SYMBOL IACODT IGRIDR	MAP LOCATION 1C 7C	SIZE AC	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL DINCS#	LOCATION E4	SUBPROGRAMS CALLED LOCATION FA	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL ID IRIG	LOCATION EC 100	SCALAR MAP LOCATION F0 104	SYMBOL I PRCNT0	LOCATION F4 108		SYMBOL JSUM IDIFF	LOCATION FA 10C	SYMBOL ISUM	LOCATION FC
SYMBOL 15 300	LOCATION 110 103	FORMAT STATEMENT MAP LOCATION 13F	SYMBOL 130	LOCATION 161		SYMBOL 199	LOCATION 198	SYMBOL 200	LOCATION 1C4

OPTIONS IN EFFECT ID.ERCOIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = RDSUMS . LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 54.PROGRAM SIZE = 1816
 STATISTICS NO DIAGNOSTICS GENERATED

FILE SELDOTS

PURDUE / LARS 3031

0001

SUBROUTINE FIL209

PURPOSE: DETERMINE LIST OF DOTS FOR A1'S TO LABEL

***** INPUT *****
 MTOTAL TOTAL NUMBER OF MATCHING DOTS FOUND
 NDOTS TOTAL NUMBER OF MATCHING DOTS NEEDED
 IUSED MATRIX OF DOTS USED

***** OUTPUT *****
 IUSED MATRIX OF DOTS USED
 LINFNO LINE NUMBER
 KOLUMN SAMPLE NUMBER
 LGRID GRID TYPE

***** INPUT *****
 IDOTCL CLUSTER ARRAY FOR 209 DOTS
 NFEEDCL NUMBER NEEDED FOR EACH CLUSTER
 NFEEDGR NUMBER NEEDED FOR TWO DOTS OR LESS GROUPS

***** OUTPUT *****
 MATCHS COUNT OF MATCHES FOR EACH CLUSTER
 LIST MATRIX 1-PLANK AT LABEL, 2-LINE NUMBER, 3-SAMPLE
 4-CLUSTER INDEX, 5-GRID
 MTOTAL TOTAL NUMBER OF DOTS FOUND

0002

COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMALS(90), PERCENT(90),
 1 IDOTCL(212), IUSED(117,196), INDEXC(90), NDEK2, ITOT2
 LOGICAL*1 IUSED

0003

0004

COMMON /RFOUTIR/ MTOTAL, NDOTS, MATCHS(90), IDATA(196), LINFNO, KOLUMN

0005

COMMON /LISTRO/ LTOTAL, LGRID, LIST(999,5), NFEEDCL(90), NFEEDGR, NGLAST

0006

COMMON /MISC/ NOACQ, LMSOIL(6), IACQNT(2,6), AI(5), NMFILE(2),
 1 SEGM, DATE(4), IGRIDPR(5), IGRIDN(5), NOPGFS, NOLNES

0007

SAVE DOTS AS NEEDED TO FILL CLUSTER REQUIREMENTS

0008

DO 140 I = 1,209
 INDEX = IDOTCL(I)

0009

0010

LINFNO = ((I-1)/19 + 1) * 10
 KOLUMN = (MOD((I-1),19) + 1) * 10

0011

C CHECK TO SEE IF THIS CLUSTER IS PART OF ZERO GROUP
 IF (NFEEDCL(INDEX) .NE. 0) GO TO 100

0012

0013

0014

C PART OF ZERO GROUP, ARE MORE NEEDED?
 CCCC IF (NFEEDGR .EQ. 0) GO TO 135
 IF (NFEEDGR .EQ. 0) GO TO 120
 NFEEDGR = NFEEDGR - 1
 GO TO 110

0015

0016

C CHECK TO SEE IF MORE PIXELS ARE NEEDED FOR CURRENT PIXEL'S CLUSTER
 100 CONTINUE
 CCC IF (MATCHS(INDEX) .EQ. NFEEDCL(INDEX)) GO TO 135
 MATCHS(INDEX) = MATCHS(INDEX) + 1

0017

C MTOTAL = SUM OF ALL POINTS NEEDED TO SATISFY USER SPECIFIED NUM PTS
 110 IF (MATCHS(INDEX) .LE. NFEEDCL(INDEX)) MTOTAL = MTOTAL + 1

0018

0019

0020

0021

0022

C LTOTAL = SUM OF ALL POINTS IN LIST INCLUDING DOTS NEEDED FOR MATCHES
 AND OTHER 209 DOTS
 120 LTOTAL = LTOTAL + 1
 LIST(LTOTAL,2) = LINFNO
 LIST(LTOTAL,3) = KOLUMN
 LIST(LTOTAL,4) = INDEX
 LIST(LTOTAL,5) = 1

C SFT DOT TO BE USED

SEL02240
 SEL02240
 SFL02300
 SFL02310
 SFL02320
 SEL02330
 SFL02340
 SEL02350
 SFL02360
 SFL02370
 SEL02380
 SFL02390
 SFL02400
 SFL02410
 SFL02420
 SFL02430
 SFL02440
 SEL02450
 SFL02460
 SFL02470
 SFL02480
 SFL02490
 SFL02500
 SFL02510
 SFL02520
 SEL02530
 SFL02540
 SFL02550
 SFL02560
 SFL02570
 SFL02580
 SFL02590
 SEL02600
 SFL02610
 SFL02620
 SFL02630
 SEL02640
 SFL02650
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 SFL02670
 SEL02680
 SEL02690
 SFL02700
 SFL02710
 SEL02720
 SFL02730
 SFL02740
 SFL02750
 SEL02760
 SFL02770
 SFL02780
 SEL02790
 SEL02800
 SFL02810
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 SEL02830
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 SFL02850
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 SFL02870
 SEL02880
 SFL02890
 SFL02900
 SFL02910
 SEL02920
 SFL02930
 SFL02940
 SFL02950
 SEL02960
 SFL02970
 SFL02980

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FIL209

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FTLF SELDOTS

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0023 135 IUSED(LINENO,KOLUMN) = .TRUE.

0024 140 CONTINUE

C
C
C
C
C
C

0025 ***** SAVE INDICES TO GRID *****
0026 IGRIDN(1) = 1
0027 IGRIDN(1) = 209
0028 NDLAST = 209
0029 MTOTAL = 209
0030 RETURN
END

SEL02900
SEL03000
SEL03010
SEL03020
SEL03030
SEL03040
SEL03050
SEL03060
SEL03070
SEL03080
SEL03090
SEL03100
SEL03110

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FILE SELDTS

FIL209

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PURDUE / LARS 3031

SYMBOL NOCIS IDOTCL	LOCATION 0 440	COMMON BLOCK /CLSTR / MAP SIZE 6294 SYMBOL CLSUM USED LOCATION 4 790 SYMBOL ISUMCL INDEXC LOCATION 8 6124	SYMBOL ISHRLS NDEX2	LOCATION 170 628C	SYMBOL PRCENT ITOT2	LOCATION 208 6290
SYMBOL MTOTAL KOLUMN	LOCATION 0 484	COMMON BLOCK /REQUIRE / MAP SIZE 488 SYMBOL NODOTS LOCATION 4 SYMBOL MATCHS LOCATION 8	SYMBOL IDATA	LOCATION 170	SYMBOL LINENO	LOCATION 480
SYMBOL LTOTAL NDLAST	LOCATION 0 4F80	COMMON BLOCK /LISTRO / MAP SIZE 4F84 SYMBOL LGRID LOCATION 4 SYMBOL LIST LOCATION 8	SYMBOL NEFDCL	LOCATION 4F14	SYMBOL NEEDGR	LOCATION 4F7C
SYMBOL NOACO SFGM NOLNFS	LOCATION 0 68 A8	COMMON BLOCK /MISC / MAP SIZE AC SYMBOL LNSOIL DATE LOCATION 4 6C SYMBOL IACODT IGRIDB LOCATION 1C 7C	SYMBOL A1 IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL I	LOCATION 08	SYMBOL INDEX	SCALAR MAP LOCATION 0C	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION

OPTIONS IN EFFECT ID,ERCNIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = FIL209 * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 30,PROGRAM SIZE = 806
 STATISTICS NO DIAGNOSTICS GENERATED

FILE SELDOTS

PURDUE / LARS 3031

0001

SUBROUTINE FILSXS

FILE REQUIREMENTS WITH DOTS CHOSEN FROM LINES 5-115, SAMPLES 5-195

***** INPUT *****
MTOTAL TOTAL NUMBER OF MATCHING DOTS FOUND
NODOTS TOTAL NUMBER OF MATCHING DOTS NEEDED
IUSED MATRIX OF DOTS USED

***** OUTPUT *****
IUSED MATRIX OF DOTS USED
LINENO LINE NUMBER
KOLUMN SAMPLE NUMBER
LGRID GRID TYPE

0002

COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMCLS(90), PRCENT(90),
1 IDOTCL(212), IUSED(117,196), INDEXC(90), NDEX2, ITOT2
LOGICAL*1 IUSED

0003

COMMON/REQUIR/MTOTAL,NODOTS,MATCHS(90),IDATA(196),LINENO,KOLUMN
COMMON/LISTRQ/LTOTAL,LGRID,LIST(999,5),NEEDCL(90),NEEDGR,NDLAST

0004

0005

0006

COMMON /MISC/ NOACO, LNSOIL(6), IACONT(2,6), AI(5), NMFILE(2),
1 SFGM,DATE(4),IGRIDR(5),IGRIDN(5),NOPGES,NOLNES

0007

SFT SUM OF PIXFLS GENERATED BY LINE NUMBER (5) AND SAMPLE (5) TO 0
ISUM = 0

0008

SET GRID TYPE TO 2
LGRID = 2

0009

0010

GET RANDOM NUMBER FOR LINE FROM MULTIPLES OF TEN FROM 5 TO 115
LINENO = UNIF(11.) * 1
LINENO = LINENO * 10 - 5

0011

0012

GET RANDOM NUMBER FOR SAMPLE FROM MULTIPLES OF TEN FROM 5 TO 195
KOLUMN = (UNIF(20.) * 1)
KOLUMN = KOLUMN * 10 - 5

0013

CHECK TO SEE IF POINT ALREADY EVALUATED
IF (IUSED(LINENO,KOLUMN)) GO TO 20

0014

CALL CKPUT TO PUT PIXFL IN LIST IF MORE OF THIS CLUSTER IS NEEDED
CALL CKPUT

0015

0016

IF SUFFICIENT DOTS FOUND, RETURN TO PRINT LIST
CONTINUE
IF (NODOTS .GT. 3 .AND. MTOTAL .GE. NODOTS) GO TO 200

0017

ADD 1 TO SUM OF DOTS CHECKED
ISUM = ISUM + 1

0018

ARE THERE MORE DOTS TO CHECK?
IF (ISUM .LT. 209) GO TO 20

0019

0020

0021

0022

*****SAVE INDICES TO GRID *****
IF (NDLAST .EQ. LTOTAL) RETURN
IGRIDR(2) = NDLAST + 1
IGRIDN(2) = LTOTAL
NDLAST = LTOTAL

0023

0024

RETURN
END

SEL03120
SEL03130
SEL03140
SEL03150
SEL03160
SEL03170
SEL03180
SEL03190
SEL03200
SEL03210
SEL03220
SEL03230
SEL03240
SEL03250
SEL03260
SEL03270
SEL03280
SEL03290
SEL03300
SEL03310
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SEL03600
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SEL03660
SEL03670
SEL03680
SEL03690
SEL03700
SEL03710
SEL03720
SEL03730
SEL03740
SEL03750
SEL03760

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FTLF SELDOTS

FIL5X5

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SYMBOL NOFLS IDOTCL	LOCATION 0 440	COMMON BLOCK /CLSTR SYMBOL CLSUM USED	LOCATION 4 790	SYMBOL ISUMCL INDEXC	LOCATION 8 6124	6294	SYMBOL ISMRLS NDFX2	LOCATION 170 628C	SYMBOL PRCENT ITOT2	LOCATION 208 6290
SYMBOL MTOTAL KOLUMN	LOCATION 0 484	COMMON BLOCK /RFQUIR SYMBOL NDDOTS	LOCATION 4	SYMBOL MATCHS	LOCATION A	488	SYMBOL IDATA	LOCATION 170	SYMBOL LINENO	LOCATION 480
SYMBOL LTOTAL NOLAST	LOCATION 0 4F80	COMMON BLOCK /LISTRO SYMBOL LGRID	LOCATION 4	SYMBOL LIST	LOCATION 8	4F84	SYMBOL NEFDCL	LOCATION 4E14	SYMBOL NEEDGR	LOCATION 4F7C
SYMBOL NOACO SFGM NOLNFS	LOCATION 0 68 A8	COMMON BLOCK /MISC SYMBOL LNSOIL DATE	LOCATION 4 AC	SYMBOL IACDOT IGRIDR	LOCATION 1C 7C	AC	SYMBOL AI IGPIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL IINTF	LOCATION CA	SUBPROGRAMS CALLED SYMBOL CKPUT	LOCATION CC	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL ISUM	LOCATION 08	SCALAR MAP SYMBOL	LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT ID,EBCDIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = FIL5X5, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 24, PROGRAM SIZE = 714
 STATISTICS NO DIAGNOSTICS GENERATED

PURDUE / LARS 3031

SEL03770

SEL037AD

SEL 03790
SEL 03800

SEL03A10

SEL 03820
SEL 03830

SEL03H40

SEL03A50
SEL03B60

SFL03850
SFL03870

SEL03840

SEL 03R40
SEL 03R00

SFL03900
SFL03910

SFL03920
SFL03920

SEL 03930
SEL 03940

SFL03450

SEL 03960
SEL 03970

SEL03980

SFL03490
SFL04600

SEL04000
SEL04010

SEL04020

SEL 04030
SEL 04040

SFL04050

SEL 04060
SEL 04070

SEL04080

SFL04090
SFL04100

SFL04100
SFL04110

SEL 04170

SFL04130
SFL04140

SEL04140
SEL04150

SFL04160

SEL 04170
SEL 04180

SEL04190

SEL 04200
SEL 04210

SEL04210
SEL04220

SEL 04230

SEL 04240
SEL 04250

SEL04260

SFL04270
SFL04280

SEL04290

SEL 04300

SEL 04 110
SEL 04 320

SEL04330

SFL04340
SFL04350

SEL 04350
SEL 04360

SEL04370

SEL04380

FORTRAN IV 6 LEVEL 21
FILE SELDOTS

FIL105

DATE = 80157

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PURDUE / LARS 3031

SYMBOL NOCLS IDOTCL	LOCATION 0 440	COMMON BLOCK /CLSTR / MAP SIZE 6294 SYMBOL LOCATION CLSUM 4 IUSED 790	SYMBOL ISUMCL INDEXC	LOCATION 8 6124	SYMBOL ISMRLS NDEX2	LOCATION 170 628C	SYMBOL PRCENT ITOT2	LOCATION 288 6290
SYMBOL MTOTAL KOLUMN	LOCATION 0 484	COMMON BLOCK /PFQUIR / MAP SIZE 488 SYMBOL LOCATION NODOTS 4	SYMBOL MATCHS	LOCATION 8	SYMBOL IDATA	LOCATION 170	SYMBOL LINENO	LOCATION 480
SYMBOL LTOTAL NDLAST	LOCATION 0 4F80	COMMON BLOCK /LISTRO / MAP SIZE 4FB4 SYMBOL LOCATION IGRID 4	SYMBOL LIST	LOCATION 8	SYMBOL NEFDCL	LOCATION 4E14	SYMBOL NEEDGR	LOCATION 4F7C
SYMBOL NOACQ SFRM NOINFS	LOCATION 0 68 A8	COMMON BLOCK /MISC / MAP SIZE AC SYMBOL LOCATION LNSOIL 4 DATE 6C	SYMBOL IACQDT IGRIDR	LOCATION 1C 7C	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 68 A4
SYMBOL INTF	LOCATION CR	SUBPROGRAMS CALLED SYMBOL LOCATION CKPUT CC	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL ISUM	LOCATION DR	SCALAR MAP SYMBOL LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT ID,ERCNIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = FIL105 * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 23,PROGRAM SIZE = 670
 STATISTICS NO DIAGNOSTICS GENERATED

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FILE SFLDOTS

PURDUE / LARS 3031

```

0001      SUBROUTINE FIL510
C
C      FILL REQUIREMENTS WITH DOTS CHOSEN FROM LINES 5-115, SAMPLES 10-190
C
C      ***** INPUT *****
C      MTOTAL TOTAL NUMBER OF MATCHING DOTS FOUND
C      NDOTS TOTAL NUMBER OF MATCHING DOTS NEEDED
C      IUSED MATRIX OF DOTS USED
C
C      ***** OUTPUT *****
C      IUSED MATRIX OF DOTS USED
C      LINENO LINE NUMBER
C      KOLUMN SAMPLE NUMBER
C      LGRID GRID TYPE
C
0002      COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMRLS(90), PRCENT(90),
0003      1 IDOTCL(212), IUSED(117,196), INDEXC(90), NDEX2, ITOT2
C      LOGICAL*1 IUSED
C
0004      COMMON /RFQUIP/ MTOTAL, NDOTS, MATCHS(90), IDATA(196), LINENO, KOLUMN
0005      COMMON /LISTRO/ LTOTAL, LGRID, LIST(999,5), NEEDCL(90), NEEDGR, NDLAST
C
0006      COMMON /MISC/ NOACQ, LNSOIL(6), IACQDT(2,6), AI(5), NMFILE(2),
C      1 SFGM, DATE(4), IGRIDR(5), IGRIDN(5), NOPGES, NOLNES
C
0007      SFT SUM OF PIXELS GENERATED BY LINE NUMBER (5) AND SAMPLE (10) TO 0
C      ISUM = 0
C
0008      SFT GRID TYPE TO 4
C      LGRID = 4
C
0009      GET RANDOM NUMBER FOR LINE FROM MULTIPLES OF TEN FROM 5 TO 115
0010      LINENO = UNIF(12.) * 1
C      LINENO = LINENO * 10 - 5
C
0011      GET RANDOM NUMBER FOR SAMPLE FROM MULTIPLES OF TEN FROM 10 TO 190
0012      KOLUMN = UNIF(19.) * 1
C      KOLUMN = KOLUMN * 10
C
0013      CHECK TO SEE IF POINT ALREADY EVALUATED
C      IF ( IUSED(LINENO,KOLUMN) ) GO TO 20
C
0014      CALL CKPUT TO PUT PIXEL IN LIST IF MORE OF THIS CLUSTER IS NEEDED
C      CALL CKPUT
C
0015      IF SUFFICIENT DOTS FOUND, RETURN TO PRINT LIST
C      IF (MTOTAL .EQ. NDOTS) GO TO 200
C
0016      ADD 1 TO SUM OF DOTS CHECKED
C      ISUM = ISUM + 1
C
0017      ARE THERE MORE DOTS TO CHECK?
C      IF (ISUM .LT. 228) GO TO 20
C
0018      ***** SAVE INDICES TO GRID *****
0019      IF (NDLAST .EQ. LTOTAL) RETURN
0020      IGRIDR(4) = NDLAST + 1
0021      IGRIDN(4) = LTOTAL
C      NDLAST = LTOTAL
C
0022      RETURN
0023      END

```

```

SEL04390
SEL04400
SEL04410
SEL04420
SEL04430
SEL04440
SEL04450
SEL04460
SEL04470
SEL04480
SEL04490
SEL04500
SEL04510
SEL04520
SEL04530
SEL04540
SEL04550
SEL04560
SEL04570
SEL04580
SEL04590
SEL04600
SEL04610
SEL04620
SEL04630
SEL04640
SEL04650
SEL04660
SEL04670
SEL04680
SEL04690
SEL04700
SEL04710
SEL04720
SEL04730
SEL04740
SEL04750
SEL04760
SEL04770
SEL04780
SEL04790
SEL04800
SEL04810
SEL04820
SEL04830
SEL04840
SEL04850
SEL04860
SEL04870
SEL04880
SEL04890
SEL04900
SEL04910
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SEL04950
SEL04960
SEL04970
SEL04980
SEL04990
SEL05000
SEL05010
SEL05020

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FIL510

DATE = 80157

14/38/56

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FILE SELDOTS

PURDUE / LARS 3031

SYMBOL NOCLS TDTOTL	LOCATION 0 440	SYMBOL CLSUM TUSED	COMMON BLOCK LOCATION 4 790	/CLSTR / MAP SIZE LOCATION 8 6124	6294	SYMBOL ISMRLS NDFX2	LOCATION 170 628C	SYMBOL PRCENT ITOT2	LOCATION 288 6290
SYMBOL MTOTAL KOIUMN	LOCATION 0 484	SYMBOL NODOTS	COMMON BLOCK LOCATION 4	/RFQUIR / MAP SIZE LOCATION 8 488	488	SYMBOL IDATA	LOCATION 170	SYMBOL LINENO	LOCATION 480
SYMBOL LTOTAL NDLAST	LOCATION 0 4F80	SYMBOL LGRID	COMMON BLOCK LOCATION 4	/LISTRO / MAP SIZE LOCATION 8 4F84	4F84	SYMBOL NEFDCL	LOCATION 4E14	SYMBOL NEFDGR	LOCATION 4F7C
SYMBOL NOACO SFGW NOLNFS	LOCATION 0 68 AR	SYMBOL LNSOIL DATE	COMMON BLOCK LOCATION 4 6C	/MISC / MAP SIZE LOCATION 1C 7C	AC	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL UNTF	LOCATION C8	SYMBOL CKPIIT	SUBPROGRAMS CALLED LOCATION CC	SYMBOL LOCATION		SYMBOL LOCATION		SYMBOL LOCATION	
SYMBOL TSUM	LOCATION D8	SYMBOL	SCALAR MAP LOCATION	SYMBOL LOCATION		SYMBOL LOCATION		SYMBOL LOCATION	

OPTIONS IN EFFECT ID,FRCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = FIL510 * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 23,PROGRAM SIZE = 670
 STATISTICS NO DIAGNOSTICS GENERATED

FILF SELDOTS

PURDUE / LARS 3031

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0001      SUBROUTINE FILPAN
C
C      FILL REQUIREMENTS WITH DOTS CHOSEN AT RANDOM
C
C      ***** INPUT *****
C      MTOTAL TOTAL NUMBER OF MATCHING DOTS FOUND
C      NODOTS  TOTAL NUMBER OF MATCHING DOTS NEEDED
C      IUSED   MATRIX OF DOTS USED
C
C      ***** OUTPUT *****
C      IUSED   MATRIX OF DOTS USED
C      LINENO  LINE NUMBER
C      KOLUMN  SAMPLE NUMBER
C      LGRID   GRID TYPE
C
0002      COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMRLS(90), PRCENT(90),
0003      1 IDOTCL(212), IUSED(117,196), INDFXC(90), NDEX2, ITOT2
C      LOGICAL*1 IUSED
C
0004      COMMON /PEQUIT/ MTOTAL, NODOTS, MATCHS(90), IDATA(196), LINENO, KOLUMN
0005      COMMON /LISTRO/ LTOTAL, LGRID, LIST(999,5), NEEDCL(90), NEEDGR, NDLAST
C
0006      COMMON /MISC/ NOACO, LNSOIL(6), IACODT(2,6), AI(5), NMFILE(2),
C      1 SFGM, DATE(4), IGRIDB(5), IGRIDN(5), NOPGES, NOLNES
C
C      SET GRID TYPE TO 5
C      LGRID = 5
C
0007      GET RANDOM NUMBER FOR LINE
C      LINENO = UNIF(117.) * 1
C
0008      GET RANDOM NUMBER FOR SAMPLE
C      KOLUMN = UNIF(196.) * 1
C
0009      CHECK TO SEE IF POINT ALREADY EVALUATED
C      IF ( IUSED(LINENO,KOLUMN) ) GO TO 20
C      CALL CKPUT TO PUT PIXFL IN LIST IF MORE OF THIS CLUSTER IS NEEDED
C      CALL CKPUT
C
0010      CHECK TO SEE IF ENOUGH DOTS FOUND
C      IF (MTOTAL .LT. NODOTS) GO TO 20
C
0011      IGRIDB(5) = NDLAST + 1
0012      IGRIDN(5) = LTOTAL
0013      NDLAST = LTOTAL
0014      RETURN
0015      END
0016
0017

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SEL05030
SEL05040
SEL05050
SEL05060
SEL05070
SEL05080
SEL05090
SEL05100
SEL05110
SEL05120
SEL05130
SEL05140
SEL05150
SEL05160
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SEL05180
SEL05190
SEL05200
SEL05210
SEL05220
SEL05230
SEL05240
SEL05250
SEL05260
SEL05270
SEL05280
SEL05290
SEL05300
SEL05310
SEL05320
SEL05330
SEL05340
SEL05350
SEL05360
SEL05370
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SEL05420
SEL05430
SEL05440
SEL05450
SEL05460
SEL05470
SEL05480
SEL05490
SEL05500
SEL05510

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FORTRAN IV G LEVEL 21
FILE SELOOTS

FILRAM

DATE = 80157

14/38/56

PAGE 0002

PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / CLSTR	SYMBOL	LOCATION	SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
NOCLS	0	LOCATION	ISUMCL	8	6294	ISMBLS	170	PRCENT	208
ITOTCL	440	LOCATION	INDEXC	6124		NOEX2	62AC	ITOT2	6290
SYMBOL	LOCATION	COMMON BLOCK / REQUIR <td>SYMBOL <td>LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION</td> </td></td></td></td></td>	SYMBOL <td>LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION</td> </td></td></td></td>	LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION</td> </td></td></td>	SIZE	SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION</td> </td></td>	LOCATION <td>SYMBOL <td>LOCATION</td> </td>	SYMBOL <td>LOCATION</td>	LOCATION
MTOTAL	0	LOCATION	MATCHS	8	488	IDATA	170	LINENO	480
KOLIJMN	484	LOCATION							
SYMBOL	LOCATION	COMMON BLOCK / LISTRO <td>SYMBOL <td>LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td></td></td>	SYMBOL <td>LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td></td>	LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td>	SIZE	SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td>	LOCATION <td>SYMBOL <td>LOCATION </td></td>	SYMBOL <td>LOCATION </td>	LOCATION
LTOTAL	0	LOCATION	LIST	8	4F84	NEFDCL	4E14	NEEDGR	4F7C
NOLAST	4F80	LOCATION							
SYMBOL	LOCATION	COMMON BLOCK / MISC <td>SYMBOL <td>LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td></td></td>	SYMBOL <td>LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td></td>	LOCATION <th>SIZE</th> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td>	SIZE	SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td>	LOCATION <td>SYMBOL <td>LOCATION </td></td>	SYMBOL <td>LOCATION </td>	LOCATION
NOACO	0	LOCATION	IACQNT	1C	AC	AI	4C	NMFILE	60
SFG4	68	DATE	IGRIDB	7C		IGRIDN	90	NOPGES	A4
NOLNES	AR								
SYMBOL	LOCATION	SUBPROGRAMS CALLED <td>SYMBOL <td>LOCATION <td></td> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td></td></td>	SYMBOL <td>LOCATION <td></td> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td></td>	LOCATION <td></td> <td>SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td></td>		SYMBOL <td>LOCATION <td>SYMBOL <td>LOCATION </td></td></td>	LOCATION <td>SYMBOL <td>LOCATION </td></td>	SYMBOL <td>LOCATION </td>	LOCATION
UNIF	AR	LOCATION	CKPUT	RC					

OPTIONS IN FFFECT ID,FRCDIC, SOURCE, NOLIST, DECK, NOLOAD, MAP
 OPTIONS IN FFFECT NAME = FILRAM . LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 17, PROGRAM SIZE = 542
 STATISTICS NO DIAGNOSTICS GENERATED

RECEIVED
 14/38/56
 14/38/56

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0001      C      SUBROUTINE CKPUT
      C      PURPOSE: . STORE DOT IN LIST, IF IT HAS NOT BEEN PREVIOUSLY USED
      C
      C      ***** INPUT *****
      C      MTOTAL TOTAL NUMBER OF MATCHING DOTS FOUND
      C      NDOTS TOTAL NUMBER OF MATCHING DOTS NEEDED
      C      IUSED MATRIX OF DOTS USED
      C      LINENO LINE NUMBER
      C      KOLUMN SAMPLE NUMBER
      C      NFEEDCL NUMBER NEEDED FOR EACH CLUSTER
      C      NFEEDGR NUMBER NEEDED FOR GROUP OF CLUSTERS WITH 2 OR LESS
      C      MATCHS NUMBER OF MATCHES FOUND FOR EACH CLUSTER
      C      LIST OF DOTS FOUND
      C      LGRID GRID TYPE
      C
      C      ***** OUTPUT *****
      C      IUSED MATRIX OF DOTS USED
      C      MATCHS NUMBER OF MATCHES FOUND FOR EACH CLUSTER
      C      MTOTAL TOTAL NUMBER OF MATCHING DOTS FOUND
      C      LTOTAL TOTAL NUMBER OF DOTS IN LIST
      C
0002      COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMRLS(90), PERCENT(90),
0003      1 IDOTCL(212), IUSED(117,196), INDEXC(90), NDFX2, ITOT2
      C      LOGICAL * IUSED
0004      COMMON /REQUTR/ MTOTAL, NDOTS, MATCHS(90), IDATA(196), LINENO, KOLUMN
0005      COMMON /LISTGR/ I TOTAL, LGRID, LIST(999,5), NFEEDCL(90), NFEEDGR, NDLAST
0006      COMMON /MISC/ NOACO, INSOIL(6), IACOT(2,6), AI(5), NMFILE(2),
      1 SEGM, DATE(4), IGRINDR(5), IGRIND(5), NOPGES, COLNES
      C
      C      IF ALL OF GRID 2 IS NEEDED SKIP UPDATING PROPORTIONS
      C
0007      IF (NDOTS .LE. 3) GO TO 110
      C      CHECK TO SEE IF PIXEL ALREADY USED
0008      IF (IUSED(LINENO,KOLUMN)) RETURN
      C
      C      READ LINE SELECTED
0009      READ (24,LINENO) LINENO, (IDATA(I),I=1,196)
      C
      C      FIND INDEX FOR SYMBOL IN CLUSTER TABLE
0010      ISYM = IDATA (KOLUMN)
0011      DO 60 K = 1,NOCLS
0012      NDFX = K
0013      IF (ISYM .EQ. ISMRLS(K)) GO TO 65
0014      CONTINUE
0015      60 WRITE (6,61) ISYM,LINENO,KOLUMN,NOCLS
0016      61 FORMAT (' PROGRAMMING ERROR, ISYM NOT IN TABLE, ISYM=*,I6,
      1 /, LINENO,KOLUMN,NOCLS=*,6I6)
      C
      C      CHECK TO SEE IF THIS CLUSTER PART OF ZERO GROUP
0017      65 IF (NFEEDCL(INDEX) .NE. 0) GO TO 100
      C
      C      PART OF ZERO GROUP, ARE MORE NEEDED
0018      IF (NFEEDGR .EQ. 0) GO TO 200
0019      NFEEDGR = NFEEDGR - 1
0020      GO TO 110
      C
      C      CHECK TO SEE IS MORE PIXELS ARE NEEDED FOR CURRENT PIXEL'S CLUSTER
0021      100 IF (MATCHS(INDEX) .GE. NFEEDCL(INDEX)) GO TO 200
      C
0022      MATCHS(INDEX) = MATCHS(INDEX) + 1
      C
0023      110 LAST= LTOTAL
      C
      C      ***** MOVE DOT INTO LIST FOR THIS GRID *****
      C
      C      CHECK FOR NO PREVIOUS DOTS FOR THIS GRID

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SEL05520
 SEL05530
 SEL05540
 SEL05550
 SEL05560
 SEL05570
 SEL05580
 SEL05590
 SEL05600
 SEL05610
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 SEL06110
 SEL06120
 SEL06130
 SEL06140
 SEL06150
 SEL06160
 SEL06170
 SEL06180
 SEL06190
 SEL06200
 SEL06210
 SEL06220

FILE SELDOTS

PURDUE / LARS 3031

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0024      IF (NDLAST .EQ. LTOTAL) GO TO 159          SFL06230
0025      IFIRST = NDLAST + 1                          SFL06240
0026      DO 158 J = IFIRST, LAST                     SFL06250
0027      IF (LIST(J,2) .LT. LINENO) GO TO 159        SFL06260
0028      IF (LIST(J,2) .EQ. LINENO .AND. LIST(J,3) .LT. KOLUMN) GO TO 158 SFL06270
C MOVE OLD LIST DOWN 1 PLACE, TO MAKE ROOM          SFL06280
C MTOTAL = MTOTAL + 1                               SFL06290
C LTOTAL = LTOTAL + 1                               SFL06300
C NMOVE = LTOTAL - J                               SFL06310
C DO 157 K = 1, NMOVE                             SFL06320
C IOLD = LTOTAL - K                               SFL06330
C NEW = IOLD + 1                                   SFL06340
C DO 156 L = 1,5                                   SFL06350
156      LIST(NEW,L) = LIST(IOLD,L)                 SFL06360
157      CONTINUE                                  SFL06370
C LIST(J,2) = LINENO                               SFL06380
C LIST(J,3) = KOLUMN                               SFL06390
C LIST(J,4) = NDFX                                 SFL06400
C LIST(J,5) = LGRID                                SFL06410
C GO TO 160                                         SFL06420
0043      C 158 CONTINUE                             SFL06430
C THIS NOT LAST ON LIST                           SFL06440
159      MTOTAL = MTOTAL + 1                         SFL06450
C LTOTAL = LTOTAL + 1                             SFL06460
C LIST(LTOTAL,2) = LINENO                         SFL06470
C LIST(LTOTAL,3) = KOLUMN                         SFL06480
C LIST(LTOTAL,4) = NDFX                           SFL06490
C LIST(LTOTAL,5) = LGRID                           SFL06500
C 160 CONTINUE                                     SFL06510
C SFT PIXFL TO 'USED'                             SFL06520
200      IUSED(LINENO,KOLUMN) = .TRUE.              SFL06530
0051      FND                                         SFL06540
0052                                         SFL06550
                                         SFL06560
                                         SFL06570
                                         SFL06580
                                         SFL06590

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661

14/38/56

DATE = R0157

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PURDUE / LARS 3031

FORTRAN IV G LEVEL 21

FILE SELOOTS

SYMBOL NOCLS INDTCL	LOCATION 0 440	SYMBOL CLSUM TUSFD	COMMON BLOCK / CLSTR LOCATION 4 790	SYMBOL ISUMCL INDEXC	MAP SIZE LOCATION 8 6124	6294	SYMBOL ISMBLS NOEX2	LOCATION 170 628C	SYMBOL PRCENT ITOT2	LOCATION 208 6290
SYMBOL MTOTAL KOLIMN	LOCATION 0 484	SYMBOL NDOTTS	COMMON BLOCK / REQUIR LOCATION 4	SYMBOL MATCHS	MAP SIZE LOCATION 8	484	SYMBOL IGATA	LOCATION 170	SYMBOL LINEN3	LOCATION 480
SYMBOL LTOTAL NOI AST	LOCATION 0 4FR0	SYMBOL LGRID	COMMON BLOCK / LISTRO LOCATION 4	SYMBOL LIST	MAP SIZE LOCATION 8	4FR4	SYMBOL NEEDCL	LOCATION 4E14	SYMBOL NEEDGH	LOCATION 4F7C
SYMBOL NOACQ SEGM NOLNES	LOCATION 0 6R AR	SYMBOL LNSOTL DATE	COMMON BLOCK / MISC LOCATION 4 6C	SYMBOL IACDOT IGRIDR	MAP SIZE LOCATION 1C 7C	AC	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL TRCOMN	LOCATION 11R	SYMBOL	SUBPROGRAMS CALLED LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL I IFIRST L	LOCATION 11C 130 144	SYMBOL ISYM J	SCALAR MAP LOCATION 120 134	SYMBOL K NOMOVE	LOCATION 124 138		SYMBOL NOEX IOLD	LOCATION 12R 13C	SYMBOL LAST NEW	LOCATION 12C 140
SYMBOL 61	LOCATION 14R	SYMBOL	FORMAT STATEMENT LOCATION	MAP SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT ID=ERCOIC, SOURCE, NOLIST, DECK, NOLOAD, MAP
 OPTIONS IN EFFECT NAME = CKPHT, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 52, PROGRAM SIZE = 1472
 STATISTICS NO DIAGNOSTICS GENERATED

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 OF POOR QUALITY

FILE SELOOTS

PURDUE / LARS 3031

```

0001      SUBROUTINE WRTLST
C
C      PURPOSE WRITE LIST ON FILE 27
C
C      ***** INPUT *****
C      LIST LIST OF 1-41 LABEL, 2-LINE NUMRFR, 3-SAMPLE, 4-CLUSTER INDEX
C      5-GRID
C      LTOTAL TOTAL NUMRFR OF DOTS FOUND
C
C      ***** OUTPUT *****
C      FILE ON UNIT 27
C      REPORT ON PRINTER
0002      COMMON /CLSTP/ NOCLS, CLSUM, ISUMCL(90), ISMRLS(90), PRCENT(90),
0003      1 INDICL(212), IUSED(117,196), INDEXC(90), INDEX2, ITOT2
C      LOGICAL*1 IUSED
C
C      COMMON/PEOUTP/NTOTAL, NODOTS, MATCHS(90), IDATA(196), LINENO, KOLUMN
0004      COMMON/LISTP2/I TOTAL, LGRID, LIST(999,5), NEEDCL(90), NEFDGR, NOLAST
0005      COMMON /MISC/ NOACQ, INSOIL(6), IACQDT(2,6), AI(5), NMFILE(2),
0006      1 SFGM, DATE(4), IGRIDR(5), IGRIDN(5), NOPGS, NOLNES
C
C      ***** MAKE TABLE I FOR A1'S *****
C      CALL SUBROUTINE TO WRITE HEADING FOR TABLE I
0007      CALL HFDIT1
C
C      WRITE (6,110) I TOTAL
0008      110 FORMAT (///,41X, '***NO LABELS AVAILABLE***',
0009      1 //,41X, 'NUMRFR OF DOTS AVAILABLE = ', I4)
C
C      *** WRITE TABLE IA SORTED BY GRID ***
0010      DO 250 I = 1,5
0011      IF (IGRIDR(I) .EQ. 0) GO TO 260
0012      LGRID = I
0013      NOPGS = 1
C
C      CALL SUBROUTINE TO WRITE HEADING FOR TABLE IA
0014      CALL HFDIT1A
C
C      WRITE (6,220)
0015      220 FORMAT ('0',40X, ' LINE SAMPLE ', /)
C
C      NOLNES = NOLNES + 1
0017      IFIRST = IGRIDR(I)
0018      LAST = IGRIDN(I)
0019      DO 250 LINE = IFIRST, LAST
0020      WRITE (6,230) (LIST(LINE,J), J=2,5)
0021      230 FORMAT ('0',39X, ' -----',415)
C
C      NOLNES = NOLNES + 2
0023      IF (NOLNES .LE. 65) GO TO 250
0024
C      WRITE HEADING FOR PAGES 2-N
0025      CALL HFDIT1
0026      WRITE (6,220)
0027      250 CONTINUE
C
C      CONTINUE
0028      260 CONTINUE
C
C      *** WRITE FILE ON UNIT 27 (SEGMENT NUMBER) LIST ***
0029      WRITE (27,299) LTOTAL, SFGM
0030      299 FORMAT (I4, ' PIXELS SELECTED FOR SEGM ', A4)
C
C      WRITE (27,300) ((LIST(I,J), J=2,5), I=1, LTOTAL)
0031      300 FORMAT (4X,414 )
C
C      WRITE (27,310)
0033      310 FORMAT ('*END*')
C
C      WRITE (27,320) (IGRIDR(I), IGRIDN(I), I=1,5)
0035      320 FORMAT (' GRID INDICES = ', 5(I4, ' ', I4,2X))
0036

```

```

SEL06600
SEL06610
SEL06620
SEL06630
SEL06640
SEL06650
SEL06660
SEL06670
SEL06680
SEL06690
SEL06700
SEL06710
SEL06720
SEL06730
SEL06740
SEL06750
SEL06760
SEL06770
SEL06780
SEL06790
SEL06800
SEL06810
SEL06820
SEL06830
SEL06840
SEL06850
SEL06860
SEL06870
SEL06880
SEL06890
SEL06900
SEL06910
SEL06920
SEL06930
SEL06940
SEL06950
SEL06960
SEL06970
SEL06980
SEL06990
SEL07000
SEL07010
SEL07020
SEL07030
SEL07040
SEL07050
SEL07060
SEL07070
SEL07080
SEL07090
SEL07100
SEL07110
SEL07120
SEL07130
SEL07140
SEL07150
SEL07160
SEL07170
SEL07180
SEL07190
SEL07200
SEL07210
SEL07220
SEL07230
SEL07240
SEL07250
SEL07260
SEL07270
SEL07280
SEL07290
SEL07300

```

FILE SFL00TS

PURDUE / LARS 3031

```

0037      C      WRITE (27,330) DATE
0038      330      FORMAT (4A4)
      C
      C      *** WRITE FILE ON UNIT 23 FOR PROCEDURE 2 ***
      C
      C      SAVE SUM FOR THE 2 OR LESS GROUP IN INDEX FOR FIRST MEMBER OF GROUP
      C      IF (INDEX2.NE.0) NFFDCL(INDEX2) = ITOT2
0039
      C
0040      WRITE (23,400) NOCLS
0041      400      FORMAT (15I4)
      C
0042      WRITE (23,400) (NFFDCL(I),I=1,30)
0043      WRITE (23,400) (INDEXC(I),I=1,30)
      C
0044      RETURN
0045      END

```

```

SEL07310
SEL07320
SEL07330
SEL07340
SEL07350
SEL07360
SEL07370
SEL07380
SEL07390
SEL07400
SEL07410
SEL07420
SEL07430
SEL07440
SEL07450
SEL07460
SEL07470

```


FORTRAN IV G LEVEL 21
FILE SELDOTS

WRTLSL

DATE = 80157

14/36/56

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PURDUE / LARS 3031

SYMBOL NOCLS IDOTCL	LOCATION 0 440	COMMON BLOCK /CLSTR / MAP SIZE 6294 SYMBOL LOCATION CLSUM 4 IUSED 700	SYMBOL ISUMCL INDEXC	LOCATION 8 6124	SYMBOL ISMRLS NOEX2	LOCATION 170 42RC	SYMBOL PRCENT ITOT2	LOCATION 288 6290
SYMBOL MTOTAL KOHIMN	LOCATION 0 484	COMMON BLOCK /REQUIR / MAP SIZE 488 SYMBOL LOCATION NOROTS 4	SYMBOL MATCHS	LOCATION 8	SYMBOL IDATA	LOCATION 170	SYMBOL LINENO	LOCATION 480
SYMBOL ITOTAL NOI AST	LOCATION 0 4F80	COMMON BLOCK /LISTRD / MAP SIZE 4F84 SYMBOL LOCATION LGRID 4	SYMBOL LIST	LOCATION 8	SYMBOL NFFDCL	LOCATION 4F14	SYMBOL NFFDGR	LOCATION 4F7C
SYMBOL NOACO SEGM NOI NFS	LOCATION 0 68 A8	COMMON BLOCK /MISC / MAP SIZE AC SYMBOL LOCATION LNSOIL 4 DATE AC	SYMBOL IACOST IGRIDB	LOCATION 1C 7C	SYMBOL AI IGRIDW	LOCATION 4C 90	SYMBOL NHFILE NOPGES	LOCATION 60 A4
SYMBOL HFAOTI	LOCATION E4	SURPROGRAMS CALLED SYMBOL LOCATION IRCON# FA	SYMBOL HEOTIA	LOCATION EC	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL I	LOCATION F0	SCALAR MAP SYMBOL LOCATION IFIRST F4	SYMBOL LAST	LOCATION F8	SYMBOL LINE	LOCATION FC	SYMBOL J	LOCATION 180
SYMBOL 110 310	LOCATION 104 1AD	FORMAT STATEMENT MAP SYMBOL LOCATION 220 148 320 185	SYMBOL 230 330	LOCATION 168 105	SYMBOL 299 400	LOCATION 183 108	SYMBOL 300	LOCATION 145

OPTIONS IN EFFECT ID,FRCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = WRTLSL, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 45, PROGRAM SIZE = 1500
 STATISTICS NO DIAGNOSTICS GENERATED

ORIGINAL FILE IN
 15-11-1956
 15-11-1956

0001

SUBROUTINE HEANTI

PURPOSE: WRITE REPORT HEADING

***** INPUT *****

DATE(4) DATE REPORT WRITTEN
IACQDT ACQUISITION DATES
SFGM SFGMENT DATE
LARFL GROUP LARFL

***** OUTPUT *****

REPORT HEADING WRITTEN

0002

COMMON /MISC/ NOACQ, LMSOIL(6), IACQDT(2,6), AI(5), NMFILE(2),
1 SFGM, DATE(4), IGRIDR(5), IGRIDN(5), NOPGES, NOLNES

0003

WRITE (6,100)

0004

100 FORMAT (1H1, 60X, 'TABLE I', //, 61X, 'SUMMARY', //)

C WRITE SFGMENT NUMBER AND DATE GENERATED

0005

150 WRITE (6,200) SFGM, DATE

0006

200 FORMAT (41X, 'SITE = ', A4, ' DATE GENERATED = ', A4)

C WRITE ACQUISITION DATES

0007

WRITE (6,300) (I, (IACQDT(J,I), J=1,2), I=1, NOACQ)

0008

300 FORMAT (/, 41X, 'ACQUISITION ', I1, ' = ', A4)

0009

RETURN

0010

END

SEL07488
SEL07490
SEL07500
SEL07510
SEL07520
SEL07530
SEL07540
SEL07550
SEL07560
SEL07570
SEL07580
SEL07590
SEL07600
SEL07610
SEL07620
SEL07630
SEL07640
SEL07650
SEL07660
SEL07670
SEL07680
SEL07690
SEL07700
SEL07710
SEL07720
SEL07730
SEL07740
SEL07750
SEL07760
SEL07770
SEL07780

FORTRAN IV 6 LEVEL 21

HEADTI

DATE = 80157

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FILE SFL00TS

PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK /MISC	/ MAP	SIZE	AC	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACO	0	LNSOIL	4	TACQDT	1C	AI	4C	NMFILE	60
SFGH	68	DATE	4C	IGRIDB	7C	IGRIDN	90	NOPGES	A4
NOLNES	AB								
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
JRCOM	9C								
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
I	AD								
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
100	AB	200	67	300	F2				

OPTIONS IN EFFECT ID,ERCNIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = HEADTI , LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 10,PROGRAM SIZE = 568
 STATISTICS NO DIAGNOSTICS GENERATED

0001

SUBROUTINE HEDTIA

PURPOSE: WRITE REPORT HEADING

***** INPUT *****

DATE(4) DATE REPORT WRITTEN
IACQDT(6) ACQUISITION DATES
SEGM SEGMENT DATE
LAREL GROUP LABEL
LGRID GRID NUMBER

***** OUTPUT *****

REPORT HEADING WRITTEN

0002
0003

COMMON/LISTRO/LTOTAL,LGRID,LIST(999,5),NEEDCL(90),NEEDGR,NOLAST
COMMON /MISC/ NOACO, LNSOIL(6), IACQDT(2,6), AT(5), NMFILE(2),
1 SFGM,DATE(4),IGRIDR(5),IGRIDN(5),NOPGES,NOLNES

0004

IF (NOPGES .GT. 1) GO TO 150

0005
0006

***** PAGE 1 *****

WRITE (6,100) LGRID

100 FORMAT (1H1,58X, 'TABLE 1A', //,61X, 'ORIGINAL SELECTED DOTS', //,
1 64X, 'ORDERED BY GRID', ///,69X, 'GRID', I2, //)

0007
0008
0009
0010

110 WRITE (6,110) SFGM, DATE
FORMAT (41X, 'SITE = ', A4, ' DATE GENERATED = ', A4)
NOLNES = 0
GO TO 190

***** PAGES 2 - N *****

0011
0012
0013

WRITE SEGMENT NUMBER AND DATE GENERATED

150 WRITE (6,200) SFGM, DATE

200 FORMAT (1H1,40X, 'SITE = ', A4, ' DATE GENERATED = ', A4)
NOLNES = 1

***** PAGES 1 - N *****

0014
0015
0016

WRITE ACQUISITION DATES

190 WRITE (6,300) (I, (IACQDT(J,I), J=1,2), I=1,NOACO)

300 FORMAT (//,41X, 'ACQUISITION ', I1, ' = ', A4)
NOLNES = NOLNES + 2*NOACO

0017

NOPGES = NOPGES + 1

0018
0019

RETURN
END

SEL07790
SEL07800
SEL07810
SEL07820
SEL07830
SEL07840
SEL07850
SEL07860
SEL07870
SEL07880
SEL07890
SEL07900
SEL07910
SEL07920
SEL07930
SEL07940
SEL07950
SEL07960
SEL07970
SEL07980
SEL07990
SEL08000
SEL08010
SEL08020
SEL08030
SEL08040
SEL08050
SEL08060
SEL08070
SEL08080
SEL08090
SEL08100
SEL08110
SEL08120
SEL08130
SEL08140
SEL08150
SEL08160
SEL08170
SEL08180
SEL08190
SEL08200
SEL08210
SEL08220
SEL08230
SEL08240
SEL08250
SEL08260
SEL08270
SEL08280
SEL08290

FORTRAN IV G LEVEL 21
FILE SELDOTS

HEDTIA

DATE = 80157

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PURDUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	COMMON BLOCK /LISTRO / MAP SIZE 4F84	SYMBOL	LOCATION	SYMBOL	LOCATION
LTOTAL NDLAST	0 4F80	LGRI0	LOCATION 4	LIST	LOCATION 8	NEEDCL	4E14
NOACO SFG4 NOINFS	0 68 A9	LNISOIL DATE	LOCATION 4 AC	SYMBOL IACQDT IGRIDB	LOCATION 1C 7C	AI IGRIDN	4C 90
SYMBOL TRCOM#	LOCATION BR	SYMBOL	SURPROGRAMS CALLED LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL I	LOCATION RC	SYMBOL J	SCALAR MAP LOCATION C0	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL 100	LOCATION C4	SYMBOL 110	FORMAT STATEMENT MAP LOCATION 115	SYMBOL 200	LOCATION 141	SYMBOL 300	LOCATION 15F

OPTIONS IN EFFECT ID,ERCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = HEDTIA , LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 19,PROGRAM SIZE = 824
 STATISTICS NO DIAGNOSTICS GENERATED
 STATISTICS NO DIAGNOSTICS THIS STEP

```

C      PURPOSE: MOVE DATA FROM A UNIVERSAL FORMAT TAPE TO A TEMP DISK FILE
C      MOVE MULTIPLE CHANNELS OF DATA
C      ***** INPUT *****
C      MULTICHANNEL DATA TAPE ON UNIT 11
C      ***** OUTPUT *****
C      FILE ON UNIT 25
C      FORMAT OF NEW FILE ON DISK 25 -- (SEGMENT NUMBER) RADIANCE
C      REC 1 - 117 RADIANCE VALUES (196 X NUMBER OF CHANNELS)
C      IDATA (INTEGER*4)
0001      IMPLICIT INTEGER (A-Z)
0002      DIMENSION FLDINF(6), FL(12)
0003      RESERVE SPACE FOR 196 * NO. OF CHANNELS PIXELS
C      DIMENSION IDATA(2400)
0004      COMMON /INFORM/HEAD(42), MAPTAP, DATAPE, SAVTAP, MAXFET,
1      PACSIZ, TAPCHK, TRNSYM, TSISYM,
2      DUPSYM, THRSYM, MAXDIV, MINDIV, SPLMAX,
3      SERIAL, TAPESV, FILESV,
4      MAXCLS, NOCLS2, MAXFLD, NOFLD2, NOFLD3,
5      NOTPFD, NOFEAT, NOFET2, NOFET4, VARSIZ,
6      VARSZ2, VARSZ4, XSIZ, NOSPEC, NOHIST,
7      NOGRP, DIVSIZ, KFEPLV, PRTLEV, YSIZ,
8      XHIGH, XLOW, SPCHAS, NOCLS3, PCTSZ
C      9IRBLOCK(30), FFTVEC(30), FFTVC2(30), HISVEC(30), INVERT(30), RESTVC(30)
0005      EQUIVALENCE (FLDINF(1), LINSTP), (FLDINF(4), SAMSTR),
*      (FLDINF(2), LINFND), (FLDINF(5), SAMFND),
*      (FLDINF(3), LININC), (FLDINF(6), SAMTNC)
0006      DIMENSION ARRAY(2000)
C      2000 LOCATIONS OF 'ARRAY' FOR FIELD DEFINITION INFORMATION.
C      FIELD INFORMATION STORED AS FOLLOWS
C      ARRAY(1) = FIRST FIELD NAME FOR THIS CLASS
C      (2) = NO. OF VERTICES FOR THIS FIELD (NV)
C      (3)-(3+NV*2) = ACTUAL VERTEX NUMBERS
C      (3+NV*2) = TOTAL PIXELS IN THIS FIELD
C      (4+NV*2)-(10+NV*2) = FLDINF BLOCK FOR THIS FIELD
0007      DIMENSION LHOLD(4), LKEEP(4)
0008      EQUIVALENCE (IHOLD, LHOLD(4)), (KFEPLV, LKEEP(4))
0009      DATA KH /'H' /, KC /'C' /, IRLNK4 /' ' /, IEND /'**' /, IRLANK /' ' /
0010      NXCLS = 1
C      ***** READ DATA FROM 1 CHANNEL TAPE *****
C      SKIP OVER DATA IN CC FILE EXCEPT FOR CHANNEL DEFINITION
0011      READ (21,6) (IDATA(I), I=1,80)
0012      FORMAT (80A1)
0013      IF (IDATA(1) .EQ. IEND) GO TO 10
0014      IF (IDATA(1) .NE. KC .OR. IDATA(2) .NE. KH) GO TO 5
C      COL = 10
0015      KOUNT = 0
0016      NOFEAT = NUMBER (IDATA, COL, FFTVEC, KOUNT)
0017      IF (NOFEAT .LE. 12) GO TO 7
0018      WRITE ERROR MESSAGE AND STOP
C      WRITE (3,9) NOFEAT
0019      FORMAT (' MAXIMUM NUMBER OF CHANNELS ALLOWED IS 12.',
0020      1 ' NUMBER ON TAPE IS', I3)
0021      STOP
0022      CONTINUE

```

GRR00010
 GRR00020
 GRR00030
 GRR00040
 GRR00050
 GRR00060
 GRR00070
 GRR00080
 GRR00090
 GRR00100
 GRR00110
 GRR00120
 GRR00130
 GRR00140
 GRR00150
 GRR00160
 GRR00170
 GRR00180
 GRR00190
 GRR00200
 GRR00210
 GRR00220
 GRR00230
 GRR00240
 GRR00250
 GRR00260
 GRR00270
 GRR00280
 GRR00290
 GRR00300
 GRR00310
 GRR00320
 GRR00330
 GRR00340
 GRR00350
 GRR00360
 GRR00370
 GRR00380
 GRR00390
 GRR00400
 GRR00410
 GRR00420
 GRR00430
 GRR00440
 GRR00450
 GRR00460
 GRR00470
 GRR00480
 GRR00490
 GRR00500
 GRR00510
 GRR00520
 GRR00530
 GRR00540
 GRR00550
 GRR00560
 GRR00570
 GRR00580
 GRR00590
 GRR00600
 GRR00610
 GRR00620
 GRR00630
 GRR00640
 GRR00650
 GRR00660
 GRR00670
 GRR00680
 GRR00690
 GRR00700
 GRR00710

FILE GRRTAPE

PURDUE / LARS 3031

```

0023      GO TO 5
0024      C READ FIELD DEFINITION
0025      10  DATAPF = 11
0026      NOFSKP = 0
0027      CALL TAPHDR(DATAPF,NOFSKP)
0028      NOFLD=0
0029      IPT=1
0030      C*
0031      C READ (1) FIELD NAME, (2) FIELD VERTICES, (3) FIELD INFORMATION
0032      C (4) NUMBER VERTICES, AND RETURN (5) NUMBER OF CARDS READ
0033      20  ICK = LARFAD(ARRAY(IPT),ARRAY(IPT+2),FLDINF,ARRAY(IPT+1), NOCRDS)
0034      NV=ARRAY(IPT+1)
0035      NOFLD=NOFLD+1
0036      NSAMP=(SAMEND-SAMSTR)/SAMINC+1
0037      IR=IPT+2
0038      IE=IR+NV*2-1
0039      WRITE (6,1600) NOFLD,ARRAY(IPT),NV,SAMINC,LININC,
0040      *      (ARRAY(I),I=IR,IE)
0041      1600 FORMAT(1X,I2,4X,I4,12X,I2,10X,I2,6X,I2,5X,
0042      *      5('(',I4,',',I4,')',2X)/2(52X,5('(',I4,',',I4,')',2X)/))
0043      C*
0044      C* POSITION TAPE FOR THIS FIELD
0045      CALL FLDINT(FLDINF,FETVFC,NOFEAT)
0046      C ***** DEFINE FILE TO BE 117 RECORDS, OF 1600 WORDS EACH *****
0047      DEFINE FILE 75 (117, 2400, U, ID)
0048      C
0049      C *** READ LINES OF DATA FROM UNIVERSAL FORMAT TAPE AND MOVE TO DISK ***
0050      NXTDOT = 1
0051      NXTCLS = 1
0052      C
0053      NOVALS = 196 * NOFFAT
0054      DO 70 LINE=LINSTR,LINEND,LININC
0055      LINENO = LINE
0056      C READ LINE FROM UNIVERSAL FORMAT TAPE (ENDTAP = -1 IF LAST LINE)
0057      CALL LINFRD(IDATA,FNDTAP)
0058      IF (ENDTAP.EQ.-1) GO TO 800
0059      C WRITE LINE ON TEMP DISK FILE
0060      WRITE (25,LINENO) (IDATA(I),I=1,NOVALS)
0061      70  CONTINUE
0062      C WRITE MESSAGE TO USER
0063      WRITE (3, 75) LINENO
0064      75  FORMAT (//,' IMAGE DATA EXTRACTED FROM TAPE, LAST LINE = ',I4)
0065      C
0066      STOP
0067      C
0068      800  WRITE (6,1400)
0069      1400 FORMAT (' END-OF-TAPE REACHED BEFORE END OF FIELD')
0070      STOP
0071      END

```

```

GRH00720
GRH00730
GRH00740
GRH00750
GRH00760
GRH00770
GRH00780
GRH00790
GRH00800
GRH00810
GRH00820
GRH00830
GRH00840
GRH00850
GRH00860
GRH00870
GRH00880
GRH00890
GRH00900
GRH00910
GRH00920
GRH00930
GRH00940
GRH00950
GRH00960
GRH00970
GRH00980
GRH00990
GRH01000
GRH01010
GRH01020
GRH01030
GRH01040
GRH01050
GRH01060
GRH01070
GRH01080
GRH01090
GRH01100
GRH01110
GRH01120
GRH01130
GRH01140
GRH01150
GRH01160
GRH01170
GRH01180
GRH01190
GRH01200
GRH01210
GRH01220
GRH01230
GRH01240
GRH01250
GRH01260
GRH01270

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FORTRAN IV G LEVEL 21
FILE GRRRTAPE

GRRRTAPE DATE = 80157
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SYMBOL	LOCATION	COMMON BLOCK /INFORM / MAP SIZE	41C	SYMBOL	LOCATION	SYMBOL	LOCATION
HEAD	0	MAPTAP	48	DATAPE	AC	SAVTAP	R0
PAGSIZ	BA	TAPCHK	RC	TRNSYM	C0	TSTSYM	C4
THPSYM	CC	MAXDIV	00	MINDIV	D4	SPLMAX	08
TAPFSV	F0	FILESV	F4	MAXCLS	F8	NOCLS2	FC
NOFLD2	F4	NOFLD3	F8	NOTREFD	FC	NOFFA2	100
NOFFT4	108	VARSIZ	10C	VARSZ2	110	VARSZ4	114
NOSEPC	11C	NOHIST	120	NOGRP	124	DIVSI	128
PRTLEV	130	YSIZ	134	XHIGH	138	XLW	13C
NOCLS3	144	PCT57	148	IPLOCK	14C	FFTVEC	1C4
HISVFC	284	INVERT	32C	REFSTVC	3A4		

SYMBOL	LOCATION	SURPROGRAMS CALLED	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	
TRCONW	DC	NUMBER	F0	TAPHDR	E4	LAREAD	E8	FLDINT	EC
DIOCSW	F0	LINERD	F4						

SYMBOL	LOCATION	EQUIVALENCE DATA MAP	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	
FLDINF	138	LINSTR	138	LINFND	13C	LININC	140	SAMSTR	144
SAMFND	148	SAMINC	14C	LHOLD	150	IMOLD	15C	LKEEP	160
KFFP	16C								

SYMBOL	LOCATION	SCALAR MAP	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	
KH	170	KC	174	IRLNK4	178	IEND	17C	IBLANK	180
NXLCLS	184	I	188	COL	18C	KOUNT	190	NOFSKP	194
NOFLD	198	IPT	19C	ICK	1A0	NOCROS	1A4	NV	1A8
NSAMP	1AC	IR	180	IE	184	ID	188	NXTDOT	18C
NXTCLS	1C0	NOVALS	1C4	LINE	1C8	LINENO	1CC	ENDTAP	100

SYMBOL	LOCATION	ARRAY MAP	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
FL	1D4	IDATA	204	ARRAY	2784			

SYMBOL	LOCATION	FORMAT STATEMENT MAP	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
6	46C4	9	46CA	1600	470E	75	4751	1400
								4786

OPTIONS IN EFFECT ID,ERCNIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = GRRRTAPE, LINFNT = 75
 STATISTICS SOURCE STATEMENTS = 54, PROGRAM SIZE = 19326
 STATISTICS NO DIAGNOSTICS GENERATED


```

C PURPOSE: LIST DOT TABLE ORDERED BY GRID (TABLE III)
C ***** INPUT *****
C   FILE ON UNIT 25
C   REC 1-117 RADIANCE VALUES
C   (196 X NUMBER OF CHANNELS)
0001 COMMON /LIST/LIST(200,5), NODOTS, NOCLS, ISMRLS(30)
0002 COMMON /BUFFER/IDATA(3200), LINEIN, COLUMN
0003 COMMON /RADIAN/NOCHAN, IGRFFN, IRRIT, IDOTRD(999,16)
0004 COMMON /MISC/ NOACO,INSOTL(6),IACQDT(2,6),AI(5),NMFILE(2),
C   1 SEGM,DATE(4),IGWTR(5),IGRTM(5),NOPGES
0005 COMMON /INFO/ NOTF(8),NUMLRL,INDATE(4,10),LRLDAT(999,5),LSTTOT,
C   1 NOTF1(4),NUDATE
0006 COMMON /WHDATE/KFDATE,KLDATE,NUMACO,NACQDT(2,6),IACNUM(6)
0007 C ***** OFFINE FILE TO RE 117 RECORDS OF 2400 WORDS EACH ***
C   DEFINE FILE 25(117, 2400, 11, 10)
C
C INITIALIZE
0008 CALL SETP10
C
C IF TOO MANY CHANNELS WRITE MESSAGE AND CONTINUE
0009 IF (NOCHAN.GT. 16) WRITE (3,900) NOCHAN
0010 900 FORMAT (1X,I3,' = INVALID NUMBER OF CHANNELS. CONTINUE.')
C
C READ LIST OF AI LABELS, LINE NUMBERS, SAMPLES
0011 CALL READAI
C
C READ DATA TAPE
0012 CALL RADRF0
C
C CALCULATE THE NUMBER OF REPORTS NEEDED BASED ON NUMBER OF ACQU
C MAXIMUM OF 6 ACQUISITION PER REPORT
0013 NUMREP = NOACO/6
0014 IF (MOD(NUMREP,6) .NE. 0) NUMREP=NUMREP+1
C
C INITIALIZE NUMBER OF PAGES FOR START OF REPORT
0015 NOPGES = 0
C
C WRITE REPORT
0016 DO 100 I=1,NUMREP
0017 KFDATE = 6*(I-1)+1
0018 KLDATE = KFDATE + 5
0019 IF (KLDATE.GT. NOACO) KLDATE = NOACO
0020 NUMACO = KLDATE - KFDATE + 1
0021 CALL GRIDOP
C
0022 100 CONTINUE
C
0023 STOP
0024 END

```

LIS00010
 LIS00020
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ORIGINAL PAGE IS
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FORTRAN IV G LEVEL 21
FILE LISTDOT

LISTDOT

DATE = 80157

14/56/32

PAGE 0002

PURQUE / LARS 3031

SYMBOL LIST	LOCATION 0	COMMON BLOCK LOCATION 4E0C	/LIST NOCLS	/MAP NOCLS	SIZE LOCATION 4F10	4FRC	SYMBOL ISMBLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL IDATA	LOCATION 0	COMMON BLOCK LOCATION 3200	/BUFFER KOLUMN	/MAP KOLUMN	SIZE LOCATION 3204	3208	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK LOCATION 4	/RADIAN IRBIT	/MAP IRBIT	SIZE LOCATION 8	4F0C	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL NOACO SEGM	LOCATION 0 6A	COMMON BLOCK LOCATION 4 4C	/MISC IACQRT IGRIDR	/MAP IACQRT IGRIDR	SIZE LOCATION 1C 7C	AB	SYMBOL AT IGRIDN	LOCATION 4C 9D	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL NOTE NOTE1	LOCATION 0 4ED4	COMMON BLOCK LOCATION 20 4FF4	/INFO NUMRL NUMATE	/MAP IUNATE	SIZE LOCATION 24	4FF8	SYMBOL LHLDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4F10
SYMBOL KEDATE	LOCATION 0	COMMON BLOCK LOCATION 4	/WHDATE NUMACQ	/MAP NUMACQ	SIZE LOCATION 8	54	SYMBOL NACQDT	LOCATION C	SYMBOL IACNUM	LOCATION 3C
SYMBOL NIOCS# GRIDOP	LOCATION C4 08	SUPPROGRAMS CALLED LOCATION C8	SYMBOL IRCOMM	LOCATION CC			SYMBOL READAI	LOCATION 00	SYMBOL MAUREU	LOCATION 04
SYMBOL ID	LOCATION E4	SCALAR MAP LOCATION FA	SYMBOL I	LOCATION FC			SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL 900	LOCATION F0	FORMAT STATEMENT LOCATION	MAP SYMBOL	LOCATION			SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN FFFCT ID,ERCDIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN FFFCT NAME = LISTDOT , LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 24,PROGRAM SIZE = 740
 STATISTICS NO DIAGNOSTICS GENERATED

FILE LISTING

PURDUE / LARS 3031

```

0001      SUBROUTINE GRINDP
C
C      PURPOSE: WRITES DOT TABLE FOR ALL GRIDS
C
0002      COMMON /LIST/LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
0003      COMMON /RUFFFP/IDATA(3200), LINEID, KOLUMN
0004      COMMON /RADIAN/NOCHAN, IGREEN, IRRIT, IOTTRD(999,16)
C      DATA IS SORTED IN ORDER IN PRINTOUT ORDER RATHER THAN
C      CHANNEL NUMBER ORDER
0005      COMMON /MISC/ NOACQ, LNSOIL(6), IACQRT(2,6), AI(5), NMFILE(2),
C      1 SFGR, DATE(4), IGRIDR(5), IGRIDN(5), NOPGES
0006      COMMON /INFO/ NOTE(8), NUMLRL, IUDATE(4,10), LRLDAT(999,5), LSTTOT,
C      1 NOTE1(4), NUUDATE
0007      DATA IRLNKS/' '
C
C      INITIALIZE
C
0008      NOPGES = 0
0009      ITOTAL = 0
C
C      WRITE REPORT BY GRID NUMBER
C
0010      DO 800 II=1,5
0011      IGRID = II
0012      IFIRST = IGRIDR(II)
0013      ILAST = IGRIDN(II)
0014      IF (IFIRST.EQ. 0) GO TO 800
0015      IF (NOPGES.EQ. 0) CALL HEDIII
C
C      WRITE TITLE FOR GRID
C
0016      CALL TITLOT(IGRID)
0017      NUMLIN = 1
C
C      WRITE CURRENT GRID
C
C
0018      DO 700 JJ=IFIRST, ILAST
C
C      WRITE A LINE IF SAMPLE IS NOT ZERO
C
0019      IF (LRLDAT(JJ,2).EQ. 0) GO TO 700
C
C      HAVE DATA
C
C      IF FIRST GRID, CALCULATE DOT NUMBER
C
0020      IMDOT = IRLNKS
0021      IF (IGRID.EQ. 1) CALL CALDOT(LRLDAT(JJ,2), LRLDAT(JJ,3), IMDOT)
0022      ITOTAL = ITOTAL + 1
0023      NUMLIN = NUMLIN + 1
C
C      IF PAGE IS COMPLETED GO TO NEXT PAGE
C
0024      IF (NUMLIN.LE. 70) GO TO 100
0025      CALL TITLOT(IGRID)
0026      NUMLIN = 6
C
C
0027      100 GO TO (110,130,150,170,190,210,210,210), NOACQ
C
C      1 ACQUISITION

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LIS00690
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FILE LISTDOT

PURQUE / LARS 3031

0028	110 WRITE (6,900)IMDOT, LRLDAT(JJ,2),LRLDAT(JJ,3),LRLDAT(JJ,1),	LIS01400
	1(IIDOTRD(JJ,1D),ID=1,NOCHAN)	LIS01410
0029	C 900 FORMAT (43X,A4.4X,I3.2X,I3.7X,A2.1X,1(5X,I3.2X,I3))	LIS01420
0030	GO TO 700	LIS01430
	C 2 ACQUISITIONS	LIS01440
	C	LIS01450
	C	LIS01460
0031	130 WRITE (6,910)IMDOT, LRLDAT(JJ,2),LRLDAT(JJ,3),LRLDAT(JJ,1),	LIS01470
	1(IIDOTRD(JJ,1D),ID=1,NOCHAN)	LIS01480
0032	910 FORMAT (38X,A4.4X,I3.2X,I3.7X,A2.1X,2(5X,I3.2X,I3))	LIS01490
0033	GO TO 700	LIS01500
	C 3 ACQUISITIONS	LIS01510
	C	LIS01520
	C	LIS01530
0034	150 WRITE (6,920)IMDOT, LRLDAT(JJ,2),LRLDAT(JJ,3),LRLDAT(JJ,1),	LIS01540
	1(IIDOTRD(JJ,1D),ID=1,NOCHAN)	LIS01550
0035	920 FORMAT (33X,A4.4X,I3.2X,I3.7X,A2.1X,3(5X,I3.2X,I3))	LIS01560
0036	GO TO 700	LIS01570
	C 4 ACQUISITIONS	LIS01580
	C	LIS01590
	C	LIS01600
0037	170 WRITE (6,925)IMDOT, LRLDAT(JJ,2),LRLDAT(JJ,3),LRLDAT(JJ,1),	LIS01610
	1(IIDOTRD(JJ,1D),ID=1,NOCHAN)	LIS01620
0038	925 FORMAT (23X,A4.4X,I3.2X,I3.7X,A2.1X,4(5X,I3.2X,I3))	LIS01630
0039	GO TO 700	LIS01640
	C 5 ACQUISITIONS	LIS01650
	C	LIS01660
	C	LIS01670
0040	190 WRITE (6,930)IMDOT, LRLDAT(JJ,2),LRLDAT(JJ,3),LRLDAT(JJ,1),	LIS01680
	1(IIDOTRD(JJ,1D),ID=1,NOCHAN)	LIS01690
0041	930 FORMAT (18X,A4.4X,I3.2X,I3.7X,A2.1X,5(5X,I3.2X,I3))	LIS01700
0042	GO TO 700	LIS01710
	C 6 ACQUISITIONS	LIS01720
	C	LIS01730
	C	LIS01740
0043	210 WRITE (6,940)IMDOT, LRLDAT(JJ,2),LRLDAT(JJ,3),LRLDAT(JJ,1),	LIS01750
	1(IIDOTRD(JJ,1D),ID=1,NOCHAN)	LIS01760
0044	940 FORMAT (13X,A4.4X,I3.2X,I3.7X,A2.1X,6(5X,I3.2X,I3))	LIS01770
	C	LIS01780
	C	LIS01790
0045	700 CONTINUE	LIS01800
	C	LIS01810
	C	LIS01820
	C	LIS01830
0046	800 CONTINUE	LIS01840
	C	LIS01850
	C	LIS01860
	C	LIS01870
0047	WRITE (3,950) ITOTAL	LIS01880
0048	950 FORMAT (1H1,'REPORT COMPLETED. LISTED ',I4,' LINES.')	LIS01890
0049	RETURN	LIS01900
0050	END	LIS01910

FORTRAN IV G LEVEL 21
FILE LISTTOT

GRIDOP

DATE = 80157

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PURDUE / LARS 3031

SYMBOL LIST	LOCATION 0	COMMON BLOCK SYMBOL NODOTS	LOCATION 4E0C	/LIST SYMBOL NODOTS	/MAP SYMBOL NODOTS	SIZE LOCATION 4E10	4FRC	SYMBOL ISMRLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL IDATA	LOCATION 0	COMMON BLOCK SYMBOL LINFNO	LOCATION 3200	/BUFFER SYMBOL COLUMN	/MAP SYMBOL COLUMN	SIZE LOCATION 3204	3208	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NORHAN	LOCATION 0	COMMON BLOCK SYMBOL IGREEN	LOCATION 4	/RADIANT SYMBOL IRBIT	/MAP SYMBOL IRBIT	SIZE LOCATION 8	F9CC	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL NOACQ SE64	LOCATION 0 68	COMMON BLOCK SYMBOL LNSOIL DATE	LOCATION 4 4C	/MISC SYMBOL IACQDT IGRIDB	/MAP SYMBOL IACQDT IGRIDB	SIZE LOCATION 1C 7C	A8	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFIL NMPGES	LOCATION 60 A4
SYMBOL NOTE NOTE1	LOCATION 0 4E04	COMMON BLOCK SYMBOL NUMRL NDATE	LOCATION 20 4EF4	/INFO SYMBOL IUPDATE	/MAP SYMBOL IUPDATE	SIZE LOCATION 24	4FF8	SYMBOL LBLDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4E00
SYMBOL MFNTII	LOCATION 12C	SURPROGRMS CALLED SYMBOL TITLDT	LOCATION 130	SYMBOL CALOOT	LOCATION 134	SYMBOL IRCOM#	LOCATION 138	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL IRLNKS ILAST	LOCATION 150 164	SCALAR MAP SYMBOL ITOTAL NUMLTN	LOCATION 154 168	SYMBOL II JJ	LOCATION 158 16C	SYMBOL IGRID IMDOT	LOCATION 15C 170	SYMBOL IFIRST ID	LOCATION 160 174	SYMBOL	LOCATION
SYMBOL 900 940	LOCATION 178 213	FORMAT STATEMENT MAP SYMBOL 910 950	LOCATION 197 232	SYMBOL 920	LOCATION 186	SYMBOL 925	LOCATION 105	SYMBOL 930	LOCATION 1F4	SYMBOL	LOCATION

OPTIONS IN EFFECT ID.FRCNIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = GRIDOP . LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 50.PROGRAM SIZE = 1904
 STATISTICS NO DIAGNOSTICS GENERATED

FORTRAN IV 6 LEVEL 21

HE0111

DATE = R0157

14/56/32

PAGE 0001

FILE LISTDOT

PURDUE / LARS 3031

0001

SUBROUTINE HE0111

LIS01920

C
C
C

PURPOSE: WRITE REPORT HEADING

LIS01930

LIS01940

LIS01950

LIS01960

LIS01970

LIS01980

LIS01990

0002

WRITE (6,100)

0003

100 FORMAT (1H1,60X,'TABLE III',///,57X,'ORDERED BY GRID',///)

0004

RETURN

0005

END

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED

FORTRAN IV G LEVEL 21
FILE LISTDOT

HEDIII

DATE = 80157

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PURDUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	SUBPROGRAMS CALLED LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IRCOM#	90								
SYMBOL	LOCATION	SYMBOL	FORMAT STATEMENT MAP LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
100	94								

OPTIONS IN EFFECT ID,ERCOIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
OPTIONS IN EFFECT NAME = HEDIII * LINECNT = 75
STATISTICS SOURCE STATEMENTS = 5,PROGRAM SIZE = 316 -
STATISTICS NO DIAGNOSTICS GENERATED

FILE LIST00T

PURDUE / LARS 3031

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0001      SUPROUTINE TITLOT(TGRID)
      C
      C      PURPOSE: WRITE TITLE FOR DOT REPORT
      C
0002      COMMON /LIST/LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
0003      COMMON /BUFFER/IDATA(3200), LINENO, KOLUMN
0004      COMMON /PADIAN/NOCHAN, IGREEN, IRRIT, IGOTRD(999,16)
0005      COMMON /MISC/ NOACQ, LNSOIL(6), IACQDT(2,6), AI(5), NMFILE(2),
      C      1 SEGM, DATE(4), IGRIDR(5), IGRIDN(5), NOPGFS
0006      COMMON /INFO/ NTF(8), NUMLRL, IUDATE(4,10), LPLDAT(999,5), LSTTOT,
      C      1 NTF1(4), NUDATE
0007      DATA IRLNKS/' '
0008      DATA IFRST1/'IDOT'
0009      DATA IFRST2/'NO'
      C
      C      WRITE SEGM, DATE GENERATED AS PART OF PAGE ON FIRST PAGE ONLY
      C
0010      IF (NOPGFS.NE.0) GO TO 10
0011      WRITE (6,900) SEGM, DATE
0012      900 FORMAT (1X, 'SEGMENT = ', A4, 21X, 'DATE GENERATED = ', A4, '/')
0013      GO TO 30
      C
0014      10 WRITE (6,901) SEGM, DATE
0015      901 FORMAT (1H1, 'SEGMENT = ', A4, 21X, 'DATE GENERATED = ', A4, '/')
      C
      C      WRITE GRID NUMBER
      C
0016      30 WRITE (6,902) IGRID
0017      902 FORMAT (1X, 62X, 'GRID ', I1)
      C
0018      IFWRD1 = IRLNK
0019      IFWRD2 = IRLNK
0020      IF (TGRID.NE.1) GO TO 40
0021      IFWRD1 = IFRST1
0022      IFWRD2 = IFRST2
      C
      C      WRITE TITLES DEPENDING ON NUMBER OF ACQUISITIONS
      C
0023      40 GO TO (100,200,300,400,500,600,600), NOACQ
      C
      C      1 ACQUISITION
      C
0024      100 WRITE (6,110) IFWRD1, ((IACQDT(I,J), I=1,2), J=1, NOACQ)
0025      110 FORMAT (/, 44X, A3, 3X, 'LINE/', 8X, 'ANALYST', 3X, 'ACQ1', A4, A1)
0026      WRITE (6,120) IFWRD2
0027      120 FORMAT (44X, A3, 8X, 'PIXFL', 4X, 'LABEL', 6X, 'G', A1, '/')
0028      GO TO 800
      C
      C      2 ACQUISITIONS
      C
0029      200 WRITE (6,210) IFWRD1, ((IACQDT(I,J), I=1,2), J=1, NOACQ)
0030      210 FORMAT (/, 39X, A3, 3X, 'LINE/', 8X, 'ANALYST', 3X, 'ACQ1', A4, A1, 3X,
      C      1 'ACQ2', A4, A1)
0031      WRITE (6,220) IFWRD2
0032      220 FORMAT (39X, A3, 8X, 'PIXFL', 4X, 'LABEL', 6X, 'G', A1,
      C      17X, 'G', A1, '/')
0033      GO TO 900
      C
      C      3 ACQUISITIONS
      C
0034      300 WRITE (6,310) IFWRD1, ((IACQDT(I,J), I=1,2), J=1, NOACQ)
0035      310 FORMAT (/, 34X, A3, 3X, 'LINE/', 8X, 'ANALYST', 3X, 'ACQ1', A4, A1, 3X,
      C      1 'ACQ2', A4, A1, 3X, 'ACQ3', A4, A1)
0036      WRITE (6,320) IFWRD2

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LIS02000
LIS02010
LIS02020
LIS02030
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LIS02690
LIS02700

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FILE LIST00T

PURDUE / LARS 3031

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0037      320 FORMAT (34X,A3,RX,'PIXFL',4X,'LAREL',6X,'G R', LIS02710
0038      17X,'G R',7X,'G B',//) LIS02720
      60 TO 800 LIS02730
C LIS02740
C LIS02750
C LIS02760
0039      4 ACQUISITIONS LIS02770
0040      400 WRITE (6,410) IF4RD1,((IACQDT(I,J),I=1,2),J=1,NOACQ) LIS02780
0040      410 FORMAT (/24X,A3,3X,'LINE/',RX,'ANALYST',3X,'ACQ1 ',A4,A1,3X, LIS02790
0041      1'ACQ2 ',A4,A1,3X,'ACQ3 ',A4,A1,3X,'ACQ4 ',A4,A1) LIS02800
0042      WRITE (6,420) IFWRD2 LIS02810
0042      420 FORMAT (24X,A3,RX,'PIXFL',4X,'LAREL',6X,'G R', LIS02820
0043      17X,'G R',7X,'G B',//) LIS02830
      60 TO 800 LIS02840
C LIS02850
C LIS02860
C LIS02870
0044      5 ACQUISITIONS LIS02880
0045      500 WRITE (6,510) IF5RD1,((IACQDT(I,J),I=1,2),J=1,NOACQ) LIS02890
0045      510 FORMAT (/19X,A3,3X,'LINE/',RX,'ANALYST',3X,'ACQ1 ',A4,A1,3X, LIS02900
0046      1'ACQ2 ',A4,A1,3X,'ACQ3 ',A4,A1,3X,'ACQ4 ',A4,A1,3X, LIS02910
0047      2'ACQ5 ',A4,A1) LIS02920
0047      WRITE (6,520) IFWRD2 LIS02930
0048      520 FORMAT (19X,A3,RX,'PIXFL',4X,'LAREL',6X,'G R', LIS02940
0048      17X,'G R',7X,'G B',//) LIS02950
      60 TO 800 LIS02960
C LIS02970
C LIS02980
C LIS02990
0049      6 ACQUISITIONS LIS03000
0050      600 WRITE (6,610) IF6RD1,((IACQDT(I,J),I=1,2),J=1,NOACQ) LIS03010
0050      610 FORMAT (/14X,A3,3X,'LINE/',RX,'ANALYST',3X,'ACQ1 ',A4,A1,3X, LIS03020
0051      1'ACQ2 ',A4,A1,3X,'ACQ3 ',A4,A1,3X,'ACQ4 ',A4,A1,3X, LIS03030
0052      2'ACQ5 ',A4,A1,3X,'ACQ6 ',A4,A1) LIS03040
0052      WRITE (6,620) IFWRD2 LIS03050
0052      620 FORMAT (14X,A3,RX,'PIXFL',4X,'LAREL',6X,'G R', LIS03060
0052      17X,'G R',7X,'G B',//) LIS03070
      60 TO 800 LIS03080
C LIS03090
C LIS03100
C LIS03110
0053      FINISHED TITLE
0054      800 NOPGES = NOPGES + 1
0055      RETURN
      END

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FORTRAN IV G LEVEL 21
FILE LISTTOT

TITLOT

DATE = 80157

14/56/32

PAGE 0003

PURQUE / LARS 3031

SYMBOL LIST	LOCATION 0	COMMON BLOCK /LIST SYMBOL NONOTS LOCATION 4F0C	/ MAP SYMBOL NOCLS LOCATION 4E10	SIZE LOCATION 4F0C	SYMBOL ISMBLS LOCATION 4F14	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL TDATA	LOCATION 0	COMMON BLOCK /BUFFER SYMBOL LTNENO LOCATION 3200	/ MAP SYMBOL KOLUMN LOCATION 3204	SIZE LOCATION 3208	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK /RADIAN SYMBOL IGREEN LOCATION 4	/ MAP SYMBOL IRBIT LOCATION 8	SIZE LOCATION F9CC	SYMBOL IDOTRD LOCATION C	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL NOACQ SEGM	LOCATION 0 6A	COMMON BLOCK /MISC SYMBOL LMSOIL LOCATION 4 DATE 6C	/ MAP SYMBOL IACQD LOCATION 7C IGRIDR	SIZE LOCATION AB 1C 7C	SYMBOL AI LOCATION 4C IGRIDN 90	SYMBOL LOCATION	SYMBOL LOCATION 60 A4 NMPFILE NOPGES
SYMBOL NOTE NOTE1	LOCATION 0 4ED4	COMMON BLOCK /INFO SYMBOL NUMLRL LOCATION 20 NUMATE 4FF4	/ MAP SYMBOL IUNATE LOCATION 24	SIZE LOCATION 4FF8	SYMBOL LRLDAT LOCATION C4	SYMBOL LOCATION	SYMBOL LOCATION 4ED0 LSTTOT
SYMBOL TRCOMW	LOCATION 13A	SUPPROGRAMS CALLED SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL TRINKS TPLNK	LOCATION 13C 150	SCALAR MAP SYMBOL IFRST1 LOCATION 140 IFWRD2 154	SYMBOL IFRST2 LOCATION 144 I 158	SYMBOL LOCATION 148 15C	SYMBOL IFWRD1 LOCATION 14C	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL 900 210 420	LOCATION 160 216 343	FORMAT STATEMENT MAP SYMBOL 901 LOCATION 180 220 24R 510 395	SYMBOL 902 LOCATION 279 310 520 3E1	SYMBOL 110 LOCATION 1CA 248 610 42D	SYMBOL 120 LOCATION 1F2 410 2F3 496 620	SYMBOL LOCATION	SYMBOL LOCATION

OPTIONS IN FFFCT ID,ERCNIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN FFFCT NAME = TITLOT * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 55,PROGRAM SIZE = 2600
 STATISTICS NO DIAGNOSTICS GENERATED

FILE LISTNOT

PURQUE / LARS 3031

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0001      SUBROUTINE PADRED                                LIS03120
      C                                                    LIS03130
      C PURPOSE: READ RADIANCE VALUES FOR SELECTED PIXELS LIS03140
      C                                                    LIS03150
0002      COMMON /LIST/ LIST(999,5), MODOTS, NOCLS, ISMHLS(30) LIS03160
      C                                                    LIS03170
0003      COMMON /INFO/NOTE(9),NUMLRL,TDATE(4,10),LRDAT(999,5),LSTTOT LIS03180
      C 1,NOTE(4),NDATE LIS03190
      C                                                    LIS03200
0004      COMMON/MISC/NOACQ,INSOIL(6),IACQDT(2,5),AI(5),NMFILE(2),SFGH, LIS03210
      C 1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES LIS03220
0005      COMMON/BUFFER/IDATA(3200),LINFNO,KOLUMN LIS03230
      C                                                    LIS03240
      C                                                    LIS03250
0006      COMMON/RADIAN/NOCHAN,IGREEN, IPRIT, IDOTRD(999,16) LIS03260
      C                                                    LIS03270
      C                                                    LIS03280
0007      DIMENSION IDTNDX(12) LIS03290
      C                                                    LIS03300
0008      DATA IDTNDX/2,1,4,3,6,5,8,7,10,9,12,11/ LIS03310
      C SFT LAST LINE TO BE 0 LIS03320
0009      LSTLNE = 0 LIS03330
      C                                                    LIS03340
      C SFT LINE SIZE TO BE 196 PIXELS * NUMBER OF CHANNELS LIS03350
0010      LINESZ = 196 * NOCHAN LIS03360
      C                                                    LIS03370
      C READ LINES OF VALUES FOR EACH PIXEL AND SAVE RADIANCE VALUES LIS03380
0011      DO 1000 I = 1,MODOTS LIS03390
0012      LINFNO = LRDAT(I,2) LIS03400
0013      KOLUMN = LRDAT(I,3) LIS03410
0014      IF (LINFNO .EQ. LSTLNE) GO TO 100 LIS03420
0015      IF (I LINFNO .EQ. 0) GO TO 1000 LIS03430
      C                                                    LIS03440
      C NEW LINE, READ LINE OF DATA LIS03450
0016      READ (25,LINFNO) (IDATA(J),J=1,LINESZ) LIS03460
0017      LSTLNE = LINFNO LIS03470
      C                                                    LIS03480
      C MOVE DATA TO IDOTRD LIS03490
0018      100 INDEX = KOLUMN LIS03500
0019      DO 200 L = 1,NOCHAN LIS03510
0020      LL = L LIS03520
0021      INDEX = LL/2 LIS03530
0022      IF (MOD(L,2) .EQ. 0) IDATA(INDEX) = IDATA(INDEX)-LNSOIL(INDEX) LIS03540
      C                                                    LIS03550
      C STORE VALUES OF GREEN NUMBER AND BRIGHTNESS INTO DOTRD IN LIS03560
      C THE ORDER OF THE PRINTOUT RATHER THAN IN CHANNEL NUMBER ORDER LIS03570
      C                                                    LIS03580
      C IDTNDX CONTAINS THE CHANNELS IN THE ORDER OF OUTPUT LIS03590
      C                                                    LIS03600
0023      INDEX1 = IDTNDX(I) LIS03610
0024      IDOTRD(I,INDEX1) = IDATA (INDEX) LIS03620
0025      200 INDEX = INDEX + 196 LIS03630
      C                                                    LIS03640
      C                                                    LIS03650
0026      1000 CONTINUE LIS03660
0027      RETURN LIS03670
0028      END LIS03680

```

FORTRAN IV 6 LEVEL 21
FILE LISTDOT

RADREF

DATE = 80157

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SYMBOL LIST	LOCATION 0	COMMON BLOCK LOCATION 4F0C	/LIST SYMBOL NOCLS	/MAP LOCATION 4E10	SIZE LOCATION 4F8C	SYMBOL ISMBLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL NOTE NOTE1	LOCATION 0 4E04	COMMON BLOCK LOCATION 20 4FF4	/INFO SYMBOL IUDATE	/MAP LOCATION 24	SIZE LOCATION 4EFA	SYMBOL LBLDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4ED0
SYMBOL NOACO SEGM	LOCATION 0 68	COMMON BLOCK LOCATION 4 4C	/MISC SYMBOL IACQNT IGRIDR	/MAP LOCATION 1C 7C	SIZE LOCATION A8	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL IDATA	LOCATION 0	COMMON BLOCK LOCATION 3200	/RUFFER SYMBOL KOLUHN	/MAP LOCATION 3204	SIZE LOCATION 3208	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK LOCATION 4	/RADIAN SYMBOL IRBIT	/MAP LOCATION 8	SIZE LOCATION F9CC	SYMBOL IDOTPD	LOCATION C	SYMBOL	LOCATION
SYMBOL IRCOM#	LOCATION 08	SURPPROGRAMS CALLED LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	LOCATION
SYMBOL LSTLNE L	LOCATION E4 F4	SCALAR MAP LOCATION FR FC	SYMBOL I NDEX	LOCATION EC 100	SYMBOL J INDEX1	LOCATION F0 104	SYMBOL INDEX	LOCATION F4	
SYMBOL IDTNDX	LOCATION 108	ARRAY MAP LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	LOCATION

OPTIONS IN EFFECT ID,ERC0IC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = RADREF * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 28,PROGRAM SIZE = 870
 STATISTICS NO DIAGNOSTICS GENERATED

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FILE LISTNOT

PURQUE / LARS 3031

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0001      SUBROUTINE READAI                                LIS03690
C                                                    LIS03700
C  PURPOSE: READ AI'S FILE FOR LATER COMPARISON      LIS03710
C                                                    LIS03720
0002      COMMON /LIST/IST(999,5), NODOTS, NOCLS, ISMBLS(30) LIS03730
C                                                    LIS03740
0003      COMMON /INFO/NOTE(R), NUMLRL, IUDATE(4,10), LRLDAT(999,5), LSTTOT LIS03750
C  1 NOTE(1,4), NIUDATE LIS03760
0004      COMMON /MISC/NOACU, INSOIL(6), IACUDT(2,6), AI(5), NMFILE(2), SEG4, LIS03770
C  1 DATF(4), IGRIDR(5), IGRIDN(5), NOPGES LIS03780
C                                                    LIS03790
0005      DATA IFND/'*END'/' LIS03800
0006      DATA ISLANK/' '/' LIS03810
C                                                    LIS03820
C  READ NUMBER OF DOTS LIS03830
C                                                    LIS03840
0007      NIUDATE = 0 LIS03850
0008      READ (29,10) LSTTOT,NOTE LIS03860
0009      10 FORMAT (I4,AA4) LIS03870
C                                                    LIS03880
0010      NUMLRL = 0 LIS03890
C  READ DOT RECORDS LIS03900
C                                                    LIS03910
0011      NODOTS = 1 LIS03920
0012      5 READ (29,20,FND=1000) (LRLDAT(NODOTS,J),J=1,5) LIS03930
0013      20 FORMAT (A4,4I4) LIS03940
C                                                    LIS03950
C  CHECK FOR END LIS03960
C                                                    LIS03970
0014      IF (LRLDAT(NODOTS,1) .EQ. IFND) GO TO 100 LIS03980
C                                                    LIS03990
C  CHECK FOR NONBLANK LABEL AND COUNT LIS04000
0015      IF (LRLDAT(NODOTS,1) .NE. ISLANK) NUMLRL = NUMLRL + 1 LIS04010
C                                                    LIS04020
0016      NODOTS = NODOTS + 1 LIS04030
0017      GO TO 5 LIS04040
C                                                    LIS04050
0018      100 NODOTS = NODOTS - 1 LIS04060
0019      WRITE (3,996) NODOTS LIS04070
0020      996 FORMAT (IX,' NODOTS = ',I5) LIS04080
C                                                    LIS04090
C  READ THE REMAINDER OF INFORMATION ON AI'S FILE LIS04100
C                                                    LIS04110
C                                                    LIS04120
C  READ BEGINNING AND ENDING ADDRESSES FOR EACH GRID LIS04130
C                                                    LIS04140
0021      READ (29,30,FND=1000) (NOTE1(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5) LIS04150
0022      30 FORMAT (4A4,5(I4,1X,I4,2X)) LIS04160
0023      WRITE (3,998) (NOTE1(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5) LIS04170
0024      998 FORMAT (IX,4A4,5(I4,1X,I4,2X)) LIS04180
0025      NIUDATE = NIUDATE + 1 LIS04190
0026      IF (NIUDATE .GT. 10) GO TO 400 LIS04200
0027      READ (29,40,FND=900) (IUDATE(I,NIUDATE),I=1,4) LIS04210
0028      40 FORMAT (4A4) LIS04220
0029      GO TO 200 LIS04230
0030      NIUDATE = NIUDATE - 1 LIS04240
0031      1000 RETURN LIS04250
0032      FND LIS04260

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ORIGINAL PAGE IS
OF POOR QUALITY

FORTRAN IV G LEVEL 21
FILE LISTOOT

READAI

DATE = 80157

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SYMBOL	LOCATION	COMMON BLOCK /LIST	SYMBOL	LOCATION	SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
LIST	0	NONOTS 4F0C	NOCLS	4E10	4E8C	ISMRLS	4E14		
SYMBOL	LOCATION	COMMON BLOCK /INFO	SYMBOL	LOCATION	SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
NOTE	0	NUMRL 20	UPDATE	24	4E8R	LRLDAT	C4	LSTTOT	4E00
NOTE1	4FD4	NUMRL 4FF4							
SYMBOL	LOCATION	COMMON BLOCK /MISC	SYMBOL	LOCATION	SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACQ	0	INSOTL 4	IACQDT	1C	4R	AI	4C	NMFILE	60
SFAM	6R	DATE 6C	IGPIDR	7C		IGRIDN	90	NOPGES	44
SYMBOL	LOCATION	SURPROGRAMS CALLED	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
TRCOMW	F0								
SYMBOL	LOCATION	SCALAR MAP	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
IEND	F4	IRLNK FR	J	FC		I	100		
SYMBOL	LOCATION	FORMAT STATEMENT MAP	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
10	104	20 10C	996	114		30	126	99R	137
40	14A								

OPTIONS IN FFFCT TO,ERCOIC,SOURCE,NOLIEY,DECK,NOLoad,MAP
 OPTIONS IN FFFCT NAME = READAI , LINE/NT = 75
 STATISTICS SOURCE STATEMENTS = 32,PROGRAM SIZE = 1162
 STATISTICS NO DIAGNOSTICS GENERATED
 STATISTICS NO DIAGNOSTICS THIS STEP

FILE LISTGRN

PURDUE / LARS 3031

```

C  PURPOSE:  PRINT TABLE IV -- ORDERED BY GREEN NUMBER
C
C  FORMAT OF INPUT FILE
C  AT LABEL, LINE NUMBER, SAMPLE, CLUSTER INDEX
C  LIST
C
C  DESCRIPTION OF VARIABLES
C
C  DATA READ FROM INPUT FILE 15--(SEGMENT NUMBER) PLATA
C  LIST(AT LABEL, LINE NUMBER, SAMPLE, ORG CLUSTER INDEX, BLANK)
C  NODOTS--NUMBER OF DOTS
C
C  BUFFER
C  IDATA--LINE OF DATA (196 PIXELS X 16 CHANNELS)
C
C  POINTERS TO CURRENT VALUES
C  LINENO--CURRENT LINE NUMBER
C  KOLUMN--CURRENT SAMPLE NUMBER
C
0001  COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
0002  COMMON/BUFFER/IDATA(3200),LINENO,KOLUMN
C
0003  COMMON/RADIAN/NOCHAN,IGPFFN,IBRIT,INDTRD(999,16)
C
0004  COMMON/MISC/NOACO,LNSOIL(6),IACQDT(2,6),AI(5),NMFILE(2),SEGM,
0005  1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES
C  COMMON /INFO/NOTE(9),NUMLRI,IUDATE(4,10),LRLDAT(999,5),LSTTOT
0006  1 ,NOTE1(4),NUIDATE
C
0006  COMMON /REPORT/IACQ1(999,6),IACQ2(999,6),IACQ3(999,6),IACQ4(999,6)
0007  COMMON /WHDATE/KFDATE,KLDATE
C
0008  DATA ISPTW1/3,ISPTW2/4/
C
0009  ***** DEFINE FILE TO BE 117 RECORDS OF 1400 WORDS EACH ***
C  DEFINE FILE 25(117, 2400, U, ID)
C
C  INITIALIZE
C
0010  CALL SETPID
0011  IF (NOCHAN.GT. 12) WRITE(3,9990)
0012  9990 FORMAT (' INVALID NO OF CHANNELS REQUESTED')
C
C  READ LIST OF AT LABELS, LINE NUMBERS, SAMPLES, CLUSTERS
C
0013  CALL READAT
C
C  GET RADIANCE VALUES FOR PIXELS
C  CALL RDRADN
C
C
C
0015  NUMRR = NOACO
C
0016  IF (NUMRR.GT. 4) NUMRR = 4
C  SET BEGINNING AND ENDING INDICES FOR ACQUISITION DATES TO BE PRINTED
C
0017  KFDATE = 1
0018  KLDATE = NUMRR
0019  IGPFFN = 2
0020  IBRIT = 1
0021  CALL MOVFIT (IACQ1(1,1))

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LIS00010
LIS00020
LIS00030
LIS00040
LIS00050
LIS00060
LIS00070
LIS00080
LIS00090
LIS00100
LIS00110
LIS00120
LIS00130
LIS00140
LIS00150
LIS00160
LIS00170
LIS00180
LIS00190
LIS00200
LIS00210
LIS00220
LIS00230
LIS00240
LIS00250
LIS00260
LIS00270
LIS00280
LIS00290
LIS00300
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LIS00620
LIS00630
LIS00640
LIS00650
LIS00660
LIS00670
LIS00680
LIS00690
LIS00700
LIS00710

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FILE LISTGRN

PUPDUE / LARS 3031

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0022      CALL PISRT (IAC01(1.1),ISRTW2)
0023      CALL PISRT (IAC01(1.1),ISRTW1)
C
C
0024      IF (NUMRR.LT.2) GO TO 200
0025      IGRFFN = 4
0026      IRRIT = 3
0027      CALL MOVFIT(IAC02(1.1))
0028      CALL PISRT (IAC02(1.1),ISRTW2)
0029      CALL PISRT (IAC02(1.1),ISRTW1)
C
C
0030      IF (NUMRR.LT.3) GO TO 200
0031      IGRFFN = 6
0032      IRRIT = 5
0033      CALL MOVFIT(IAC03(1.1))
0034      CALL PISRT (IAC03(1.1),ISRTW2)
0035      CALL PISRT (IAC03(1.1),ISRTW1)
C
C
0036      IF (NUMRR.LT. 4) GO TO 200
C
C
0037      IGRFFN = 8
0038      IRRIT = 7
0039      CALL MOVFIT (IAC04(1.1))
0040      CALL PISRT (IAC04(1.1),ISRTW2)
0041      CALL PISRT (IAC04(1.1),ISRTW1)
C
0042      WRITE GPID REPORT
200 CALL REPGRD (NUMRR)
C
C
C      IF MORE THAN 4 ACQUISITIONS THEN WRITE REMAINING
0043      IF (NOACQ.LE.4) GO TO 400
0044      NUMRR = NOACQ - 4
C
C
C      SFT INDICES FOR ACQUISITION DATES BASED ON NUMBER OF ACQUISITIONS
0045      KDATE = 5
0046      KLDATE = NOACQ
C
C
C      ZERO FIRST AND SECOND ACQUISITION BUFFER
0047      DO 300 I=1,6
0048      DO 300 J=1,999
0049      IAC01(J,I) = 0
0050      300 IAC02(J,I) = 0
C
C
C      COMPLETE PROCESSING OF REMAINING ACQUISITIONS
0051      IGRFFN = 10
0052      IRRIT = 9
0053      CALL MOVFIT (IAC01(1.1))
0054      CALL PISRT(IAC01(1.1),ISRTW2)
0055      CALL PISRT(IAC01(1.1),ISRTW1)
C
0056      IF (NOACQ.LT. 5) GO TO 350
0057      IGRFFN = 12
0058      IRRIT = 11
0059      CALL MOVFIT (IAC02(1.1))
0060      CALL PISRT (IAC02(1.1),ISRTW2)
0061      CALL PISRT (IAC02(1.1),ISRTW1)
C
C
C      WRITE REMAINING REPORT
0062      350 CALL REPGRD (NUMRR)
0063      400 CONTINUE
0064      STOP
0065      END

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LIS00720
LIS00730
LIS00740
LIS00750
LIS00760
LIS00770
LIS00780
LIS00790
LIS00800
LIS00810
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LIS01120
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LIS01150
LIS01160
LIS01170
LIS01180
LIS01190
LIS01200
LIS01210
LIS01220
LIS01230
LIS01240
LIS01250
LIS01260
LIS01270
LIS01280
LIS01290
LIS01300
LIS01310
LIS01320
LIS01330
LIS01340
LIS01350
LIS01360
LIS01370
LIS01380
LIS01390
LIS01400

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FILE LISTGRN

LISTGRN

DATE = 80157

14/49/51

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SYMBOL LIST	LOCATION 0	COMMON BLOCK /LIST LOCATION 4F0C	SYMBOL NODOTS	/ MAP SYMBOL NOCLS	SIZE LOCATION 4F10	SYMBOL TSMBLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL IDATA	LOCATION 0	COMMON BLOCK /RUFFER LOCATION 3200	SYMBOL LINENO	/ MAP SYMBOL KOLUMN	SIZE LOCATION 3204	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK /RADIAN LOCATION 4	SYMBOL IGREEN	/ MAP SYMBOL IRRT	SIZE LOCATION 8	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL NOACO SEGM	LOCATION 0 68	COMMON BLOCK /HISC LOCATION 4	SYMBOL LNSOIL DATE	/ MAP SYMBOL IACODT IGRIDB	SIZE LOCATION 1C 7C	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL NOTE NOTE1	LOCATION 0 4ED4	COMMON BLOCK /INFO LOCATION 20 4FF4	SYMBOL NUMLRL NUMATE	/ MAP SYMBOL IUDATE	SIZE LOCATION 24	SYMBOL LRLDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4E00
SYMBOL IAC01	LOCATION 0	COMMON BLOCK /REPORT LOCATION 50AR	SYMBOL IAC02	/ MAP SYMBOL IAC03	SIZE LOCATION 176A0 RB50	SYMBOL IAC04	LOCATION 118F8	SYMBOL	LOCATION
SYMBOL KDATE	LOCATION 0	COMMON BLOCK /WHDATE LOCATION 4	SYMBOL KDATE	/ MAP SYMBOL	SIZE LOCATION 8	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL DIOCS# MOVFIT	LOCATION 100 114	SUBPROGRAMS CALLED LOCATION 104 114	SYMBOL SETPID PISRT	SYMBOL IRCON# REPGRD	LOCATION 10R 11C	SYMBOL READAI	LOCATION 10C	SYMBOL RDRADN	LOCATION 110
SYMBOL ISRTW1 J	LOCATION 1A0 1R4	SCALAR MAP LOCATION 1A4	SYMBOL ISRTW2	SYMBOL ID	LOCATION 1AB	SYMBOL NUMBR	LOCATION 1AC	SYMBOL I	LOCATION 1B0
SYMBOL 9990	LOCATION 1R4	FORMAT STATEMENT MAP LOCATION	SYMBOL	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT ID,ERCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = LISTGRN, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 65,PPROGRAM SIZE = 1592
 STATISTICS NO DIAGNOSTICS GENERATED

FILE LISTGRN

PURDUE / LARS 3031

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0001      SUBROUTINE RDRADN                                LIS01420
C          PURPOSE: READ RADIANCE VALUES FOR SELECTED PIXELS LIS01430
C          COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30) LIS01440
0002      COMMON /INFO/NOTE(8),NIMLRL,IUDATE(4,10),LRLDAT(999,5),LSTTOT LIS01450
0003      COMMON /NOTE1(4),NUDATE LIS01460
C          COMMON/MISC/NOACO,INSOIL(6),IACOOT(2,6),AI(5),NMFILE(2),SEGHI LIS01470
0004      I DATE(4),IGRIDR(5),IGRIDN(5),NOPGES LIS01480
C          COMMON/RUFFFP/IDATA(3200),LINENO,KOLUMN LIS01490
0005      COMMON/RADIAN/NOCHAN,IGRFEN,IRRT, IDOTRD(999,16) LIS01500
C          COMMON/RADIAN/NOCHAN,IGRFEN,IRRT, IDOTRD(999,16) LIS01510
0006      SET LAST LINE TO BE 0 LIS01520
C          LSTLNE = 0 LIS01530
0007      SET LINE SIZE TO BE 196 PIXELS * NUMBER OF CHANNELS LIS01540
C          LINESZ = 196 * NOCHAN LIS01550
0008      READ LINES OF VALUES FOR EACH PIXEL AND SAVE RADIANCE VALUES LIS01560
C          DO 1000 I = 1,NODOTS LIS01570
0009      LINENO = LRLDAT(I,2) LIS01580
0010      KOLUMN = LRLDAT(I,3) LIS01590
0011      IF (LINENO .EQ. LSTLNE) GO TO 100 LIS01600
0012      IF (LINENO .EQ. 0) GO TO 1000 LIS01610
0013      NEW LINE, READ LINE OF DATA LIS01620
C          READ (25,LINENO) (IDATA(J),J=1,LINESZ) LIS01630
0014      LSTLNE = LINENO LIS01640
0015      MOVE DATA TO IDOTRD LIS01650
C          INDEX = KOLUMN LIS01660
0016      DO 200 L = 1,NOCHAN LIS01670
0017      LL = L LIS01680
0018      INDEX = LL/2 LIS01690
0019      IF (MOD(LL,2) .EQ. 0) IDATA(INDEX) = IDATA(INDEX) - LNSOIL(INDEX) LIS01700
0020      IDOTRD(I,L) = IDATA(INDEX) LIS01710
0021      IDOTRD(I,L) = IDATA(INDEX) LIS01720
0022      INDEX = INDEX + 196 LIS01730
C          200 LIS01740
C          1000 LIS01750
0023      CONTINUE LIS01760
0024      RETURN LIS01770
0025      END LIS01780

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LIS01420
LIS01430
LIS01440
LIS01450
LIS01460
LIS01470
LIS01480
LIS01490
LIS01500
LIS01510
LIS01520
LIS01530
LIS01540
LIS01550
LIS01560
LIS01570
LIS01580
LIS01590
LIS01600
LIS01610
LIS01620
LIS01630
LIS01640
LIS01650
LIS01660
LIS01670
LIS01680
LIS01690
LIS01700
LIS01710
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LIS01730
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LIS01750
LIS01760
LIS01770
LIS01780
LIS01790
LIS01800
LIS01810
LIS01820
LIS01830
LIS01840
LIS01850
LIS01860
LIS01870

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FORTTRAN IV G LEVEL 21
FILE LISTGRN

RDRADN

DATE = 90157

14/49/51

PAGE 0002

PURDUE / LARS 3031

SYMBOL LIST	LOCATION 0	COMMON BLOCK /LIST LOCATION 4F0C	SYMBOL NODOTS	SYMBOL NOCLS	SIZE LOCATION 4E10	4F8C	SYMBOL TSMRLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL NOTE	LOCATION 0	COMMON BLOCK /INFO LOCATION 20	SYMBOL NUMBLR	SYMBOL IUNATE	SIZE LOCATION 24	4FF8	SYMBOL LRLDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4EB0
SYMBOL NOACQ SEGM	LOCATION 0 68	COMMON BLOCK /MISC LOCATION 4	SYMBOL LNSOIL DATE	SYMBOL IACQDT IGRIDR	SIZE LOCATION 1C 7C	A8	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL N4FILE NOPGES	LOCATION 08 A4
SYMBOL TDATA	LOCATION 0	COMMON BLOCK /RUFFR LOCATION 3200	SYMBOL LTNENO	SYMBOL KOLUHN	SIZE LOCATION 3204	3208	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK /RADIAN LOCATION 4	SYMBOL IGREEN	SYMBOL IRPIT	SIZE LOCATION 8	F9CC	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL TRCONM	LOCATION 08	SURPROBANS CALLED LOCATION	SYMBOL	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL LSTLINE L	LOCATION F4 FR	SCALAR MAP LOCATION FR FC	SYMBOL LINESZ LL	SYMBOL Y NOFX	LOCATION EC 100		SYMBOL J	LOCATION F0	SYMBOL INDEX	LOCATION F4

OPTIONS IN FFFECT ID,ERCOIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN FFFECT NAME = RDRADN , LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 25,PROGRAM SIZE = 794
 STATISTICS NO DIAGNOSTICS GENERATED

RECEIVED
PURDUE UNIVERSITY
LIBRARY
JAN 11 1952

FILE LISTGRN

PURDUE / LARS 3031

```

0001      SUBROUTINE MOVFIT (ITEMP)
C
C      PURPOSE:  MOVE INFORMATION FROM INPUT FILES TO HOLD AREA FOR SORTING
C
0002      COMMON /INFO/NOTE(8),NUMLRL,IUPDATE(4,10),LBLDAT(999,5),LSTTOT
C      1,NOTE(4),NUPDATE
C
0003      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMALS(30)
C
0004      COMMON/RAJIAN/NOCHAN,IGREFN, IRRIT, INOTRD(999,16)
C
0005      DIMENSION ITEMF(999,6)
C
C      MOVE DATA TO HOLD AREA FOR SORTING
C
0006      NDEX = 0
C
0007      DO 100 I = 1,NODOTS
C
C      DO NOT STORE ZERO LINE OR SAMPLE
C
0008      IF (LBLDAT(I,2).EQ.0 .OR. LBLDAT(I,3).EQ.0) GO TO 100
0009      NDEX = NDEX + 1
0010      ITEMF(NDEX,1) = LBLDAT(I,2)
0011      ITEMF(NDEX,2) = LBLDAT(I,3)
0012      ITEMF(NDEX,3) = INOTRD(I,IGREFN)
0013      ITEMF(NDEX,4) = INOTRD(I,IRRIT)
C
C      CALCULATE DOT NUMBER BASED ON LIST AND STORE
C
0014      CALL CALDOT(LBLDAT(I,2),LBLDAT(I,3),IMDOT)
C
C      STORE DOT NUMBER
C
0015      ITEMF(NDEX,6) = IMDOT
C
0016      100 CONTINUE
C
C      SAVE NUMBER OF DATA PIXELS STORED FOR FURTHER PROCESSING
C
0017      LSTTOT = NDEX
C
C      PRINT FOR CHECKOUT
C
0018      RETURN
0019      END

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LIS01840
LIS01860
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LIS01990
LIS02000
LIS02010
LIS02020
LIS02030
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LIS02100
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LIS02120
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FORTRAN IV 6 LEVEL 21
FILE LISTGRN

MOVFIT

DATE = 80157

14/49/51

PAGE 0002

PURDIE / LARS 3031

SYMBOL	LOCATION	SYMBOL	COMMON BLOCK / INFO	SYMBOL	MAP SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
NOTE1	0 4ED4	NUMLE NUDATE	LOCATION 20 4FF4	IUDATE	24	L6LDATE	C4	LSTTOT	4ED0		
LIST	0	NONOTS	COMMON BLOCK / LIST LOCATION 4FDC	NOCLS	4E10	ISMRLS	4E14		LOCATION		
NOCHAN	0	IGREEN	COMMON BLOCK / RADIAN LOCATION 4	IBRIT	8	IDOTRD	C		LOCATION		
CALDOT	B4		SUBPROGRAMS CALLED LOCATION		LOCATION		LOCATION		LOCATION		
NDFX	C4	I	SCALAP MAP LOCATION CR	INDOT	CC		LOCATION		LOCATION		
ITFMP	00		ARRAY MAP LOCATION		LOCATION		LOCATION		LOCATION		

OPTIONS IN EFFECT ID.FRCNIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = MOVFIT * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 10.PROGRAM SIZE = 754
 STATISTICS NO DIAGNOSTICS GENERATED

10-10-51
10-10-51

FILE LISTGRN

PURDUE / LARS 3031

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0001      SUBROUTINE REPGRD (NUMRR)
0002      PURPOSE:  REPORT THE SFTS OF LINES NUMBERS, SAMPLES, GREENNESS AND
0003                BRIGHTNESS VALUES BY THEIR GRID NUMBER
0004
0005      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
0006      COMMON/MISC/NOACO,INSOIL(6),IACQNT(2,6),AI(5),NMFILE(2),SEGM,
0007      1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES
0008      COMMON/INFO/NOTE(4),NUMLRL,IUDATE(4,10),LRLDAT(999,5),LSTTOT
0009      1,NOTE1(4),NUDATE
0010      COMMON/BUFFFF/IDATA(3200),IINFNO,KOLUMN
0011      COMMON/PLOT/TITLE(20),XLARFL(20),YLARFL(5),NPOTNT,X(1000),Y(1000)
0012      COMMON/RADIAN/NOCHAN,IGREEN,IPRIT, IDOTRD(999,16)
0013      COMMON /REPORT/IACQ1(999,6),IACQ2(999,6),IACQ3(999,6),IACQ4(999,6)
0014
0015      WRITE THE TITLE FOR REPORT
0016
0017      NOPGES = 0
0018      CALL HEADIV
0019      CALL TITLES (NUMRR)
0020      NUMLIN = 1
0021
0022      WRITE REPORT DEPENDING ON NUMBER OF ACQUISITIONS
0023
0024      IFIRST = 1
0025      LAST = LSTTOT
0026      DO 900 IA=IFIRST,LAST
0027
0028      COUNT NUMBER OF LINES
0029
0030      NUMLIN = NUMLIN + 1
0031
0032      100 IF (NUMLIN .LE. 70) GO TO 110
0033      NUMLIN = 8
0034      CALL TITLES (NUMRR)
0035
0036      WRITE DATA DEPENDENT ON NUMBER OF ACQUISITIONS TO BE PRINTED
0037
0038      110 GO TO (120,140,160,180), NUMRR
0039
0040      1 ACQUISITION
0041
0042      120 WRITE(6,125) IACQ1(IA,3),IACQ1(IA,4),IACQ1(IA,6),IACQ1(IA,1)
0043      1,IACQ1(IA,2)
0044      125 FORMAT(1X,*,2X,I3,4X,I3,4X,A4,2X,I3,1X,I3,1X,*)
0045      GO TO 900
0046
0047      2 ACQUISITIONS
0048
0049      140 WRITE(6,145) IACQ1(IA,3),IACQ1(IA,4),IACQ1(IA,6),IACQ1(IA,1)
0050      1,IACQ1(IA,2),IACQ2(IA,3),IACQ2(IA,4),IACQ2(IA,6),
0051      2IACQ2(IA,1),IACQ2(IA,2)
0052      145 FORMAT (1X,*,2(2X,I3,4X,I3,4X,A4,2X,I3,1X,I3,1X,*))
0053      GO TO 900
0054
0055      3 ACQUISITIONS
0056
0057      160 WRITE(6,165) IACQ1(IA,3),IACQ1(IA,4),IACQ1(IA,6),IACQ1(IA,1)
0058      1,IACQ1(IA,2),IACQ2(IA,3),IACQ2(IA,4),IACQ2(IA,6),
0059      2IACQ2(IA,1),IACQ2(IA,2),IACQ3(IA,3),IACQ3(IA,4),IACQ3(IA,6),
0060      3,IACQ3(IA,1),IACQ3(IA,2)
0061      165 FORMAT (1X,*,3(2X,I3,4X,I3,4X,A4,2X,I3,1X,I3,1X,*))
0062

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LIS02350
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LIS02980
LIS02990
LIS03000
LIS03010
LIS03020
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LIS03040
LIS03050

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FILE LISTGRN

PHRDUE / LARS 3031

0029

GO TO 800

C
C
C

4 ACQUISITIONS

0030

180 WRITE(6,185)IACQ1(IA,3),IACQ1(IA,4),IACQ1(IA,6),IACQ1(IA,1)
1,IACQ1(IA,2),IACQ2(IA,3),IACQ2(IA,4),IACQ2(IA,6),
2,IACQ2(IA,1),IACQ2(IA,2),IACQ3(IA,3),IACQ3(IA,4),IACQ3(IA,6),
3,IACQ3(IA,1),IACQ3(IA,2),IACQ4(IA,3),IACQ4(IA,4),
4,IACQ4(IA,6),IACQ4(IA,1),IACQ4(IA,2)

0031

185 FORMAT (1X,10I4(2X,I3,4X,I3,4X,A4,2X,I3,1X,I3,1X,'*'))

0032

800 CONTINUE

0033

RETURN

0034

END

LIS03060
LIS03070
LIS03080
LIS03090
LIS03100
LIS03110
LIS03120
LIS03130
LIS03140
LIS03150
LIS03160
LIS03170
LIS03180

PURDUE / LARS 3031

SYMBOL LIST	LOCATION 0	SYMBOL MONOTS	COMMON BLOCK LOCATION 4F0C	/LIST	SYMBOL NOCLS	/MAP	SIZE LOCATION 4E10	4ERC	SYMBOL ISMRLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL NOACO SFGM	LOCATION 0 6A	SYMBOL INSOIL DATE	COMMON BLOCK LOCATION 4C 6C	/MISC	SYMBOL IACONT IGRIOB	/MAP	SIZE LOCATION 1C 7C	AR	SYMBOL AI IGRION	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL NOTE NOTF1	LOCATION 0 4ED4	SYMBOL NUMLRL NUNATF	COMMON BLOCK LOCATION 20 4FF4	/INFO	SYMBOL IUNATE	/MAP	SIZE LOCATION 24	4FFH	SYMBOL EBLDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4ED0
SYMBOL IDATA	LOCATION 0	SYMBOL LTNEND	COMMON BLOCK LOCATION 3200	/RUFFER	SYMBOL KOLUMN	/MAP	SIZE LOCATION 3204	3208	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL TITLE Y	LOCATION 0 105A	SYMBOL XLARFL	COMMON BLOCK LOCATION 50	/PLOT	SYMBOL YLARFL	/MAP	SIZE LOCATION A0	1FFH	SYMBOL NPOINT	LOCATION R4	SYMBOL X	LOCATION R8
SYMBOL NOCHAN	LOCATION 0	SYMBOL IGREFN	COMMON BLOCK LOCATION 4	/RADIAN	SYMBOL IPRIT	/MAP	SIZE LOCATION 8	F9CC	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL IAC01	LOCATION 0	SYMBOL IACQ2	COMMON BLOCK LOCATION 50A9	/REPORT	SYMBOL IACQ3	/MAP	SIZE LOCATION 8R50	176A0	SYMBOL IACQ4	LOCATION 118F8	SYMBOL	LOCATION
SYMBOL HFNATV	LOCATION 100	SYMBOL TITLEG	SURPROGRAMS CALLED LOCATION 104		SYMBOL IRCOM#		LOCATION 108		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NUMBR	LOCATION 114	SYMBOL NUMLTN	SCALAR MAP LOCATION 11A		SYMBOL IFRST		LOCATION 11C		SYMBOL LAST	LOCATION 120	SYMBOL IA	LOCATION 124
SYMBOL 125	LOCATION 12A	SYMBOL 145	FORMAT STATEMENT MAP LOCATION 14A		SYMBOL 165		LOCATION 16B		SYMBOL 185	LOCATION 18E	SYMBOL	LOCATION

```
*OPTIONS IN EFFECT* ID,FHCDC,SOURCE,NOLIST,DECK,NOLOAD,MAP
*OPTIONS IN EFFECT* NAME = RPPGRD * LINFCT = 75
*STATISTICS* SOURCE STATEMENTS = 34,PROGRAM SIZE = 1532
*STATISTICS* NO DIAGNOSTICS GENERATED
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FILE LISTGRN

PURDUE / LARS 3031

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0001      SUBROUTINE TITLEG (NUMRR)
C
C      PURPOSE:  WRITES TITLE FOR GREENNESS REPORT
C
0002      COMMON /RADIAN/NOCHAN,IGREFN,IRRT,IDOTRD(999,16)
0003      COMMON/MISC/NOACO,LNSOIL(6),IACQDT(2,6),AI(5),NMFILE(2),SEGM,
C      1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES
C
0004      COMMON /INFO/NOTE(8),NUMRL, IUNDATE(4,10),LBLDAT(999,5),LSTTOT
C      1,NOTE1(4),NUDATE
0005      COMMON /REPORT/IACQ1(999,6),IACQ2(999,6),IACQ3(999,6),IACQ4(999,6)
C
0006      COMMON /WHDATE/KFDATE,KLDATE
C
0007      LOGICAL*1 ASTRSK(128)
0008      EQUIVALENCE (IASTR(1),ASTRSK(1))
0009      DIMENSION IASTR(32)
0010      DIMENSION IHEAD(4)
0011      DIMENSION IATEMP(2)
0012      DATA IHEAD/'ACQ1','ACQ2','ACQ5','ACQ6'/
0013      DATA ASTRSK/128*1H*/
C
C      SFT BEGINNING AND ENDING ACQUISITION DATE TO SHORTER NAME FOR INDEXING
C
0014      M = KFDATE
0015      N = KLDATE
C
C      STORE APPLICABLE ACQUISITION TITLE TO BE PRINTED
C
0016      IATEMP(1) = IHEAD(1)
0017      IATEMP(2) = IHEAD(2)
0018      IF (KFDATE.EQ.1) GO TO 5
0019      IATEMP(1) = IHEAD(3)
0020      IATEMP(2) = IHEAD(4)
C
0021      5 CONTINUE
0022      IF (NOPGES.NE.0) GO TO 10
0023      WRITE (6,20) SFGM,DATE
0024      20 FORMAT (1X,'SEGMENT = ',A4,21X,'DATE GENERATED = ',A4)
0025      GO TO 25
0026      10 WRITE (6,30) SFGM,DATE
0027      30 FORMAT (1H1,'SFGMENT = ',A4,21X,'DATE GENERATED = ',A4)
C
C      1 ACQUISITION
C
0028      25 IF (NUMRR.NE.1) GO TO 100
0029      WRITE (6,60) (IASTR(I),I=1,8),IATEMP(1),(IACQDT(I,M),I=1,2),
C      6 (IASTR(I),I=1,8)
0030      60 FORMAT (/1X,8A4,/,1X,*,10X,A4,1X,A4,A2,9X,*,/,1X,8A4,
C      1 /,1X,*,30X,*)
0031      WRITE (6,65)
0032      65 FORMAT(1X,*,GREEN BRIGHT DOT LINE/,2X,*)
0033      WRITE (6,66) (IASTR(I),I=1,8)
0034      66 FORMAT(1X,*,NO. NFSS NO. PIXFL/,2X,*,/,1X,*,30X,*,
C      1 /,1X,8A4)
0035      GO TO 200
C
C      2 ACQUISITIONS.
C
0036      100 IF (NUMRR.NE.2) GO TO 110
C
C      CALCULATE INDEX FOR SECOND DATE
C
0037      MM = M + 1
0038      WRITE (6,70) (IASTR(I),I=1,16),IATEMP(1),(IACQDT(I,M),I=1,2),
C      1 IATEMP(2),(IACQDT(I,MM),I=1,2),(IASTR(I),I=1,16)
0039      70 FORMAT (/1X,15A4,A3,/,1X,*,10X,A4,1X,A4,A2,9X,*,10X,A4,1X
C      1 ,A4,A2,9X,*,/,1X,15A4,A3,/,1X,*,30X,*,30X,*)
0040      WRITE (6,75)
0041      75 FORMAT (1X,*,GREEN BRIGHT DOT LINE/,2X,

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LIS03190
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0042      1 ** GREEN BRIGHT DOT LINE//.2X,**)
0043.    76 FORMAT (1X,*) NO. NFSS NO. PIXEL'.2X,*,*,
      1 ' NO. NFSS NO. PIXEL'.2X,*,*,/.1X,*,*,30X,*,*,30X,*,*,
0044      1 /.1X,15A4,A3,/.1X,*,*,30X,*,*,30X,*,*,
      GO TO 200
C
C 3 ACQUISITIONS
0045    110 IF (NUMRR.NE.3) GO TO 120
0046      WRITE (6,80) (IASTR(I),J=1,24) * ((IACQDT(I,J),I=1,2),J=M,N)
      1.(IASTR(I),I=1,24)
0047      80 FORMAT (/,.1X,23A4,A2,
      1 /.1X,*,*,10X,*,*,ACQ1 ',A4,A2,9X,*,*,10X,*,*,ACQ2 ',
      2 A4,A2,9X,*,*,10X,*,*,ACQ3 ',A4,A2,9X,*,*,
      3 /.1X,23A4,A2,/.1X,*,*,30X,*,*,30X,*,*,30X,*,*,)
0048      WRITE (6,85)
0049      85 FORMAT (1X,*) ** GREEN BRIGHT DOT LINE//.2X,
      1 ** GREEN BRIGHT DOT LINE//.2X,
      2 ** GREEN BRIGHT DOT LINE//.2X,*)
0050      WRITE (6,86) (IASTR(I),I=1,24)
0051      86 FORMAT (1X,*) ** NO. NFSS NO. PIXEL'.2X,*,*,
      1 ' NO. NFSS NO. PIXEL'.2X,*,*,/.1X,*,*,30X,*,*,30X,*,*,30X,*,*,
      1 *,*,/.1X,23A4,A2,/.1X,*,*,30X,*,*,30X,*,*,30X,*,*,)
      GO TO 200
C
C 4 ACQUISITIONS
0053    120 IF (NUMRR.NE.4) GO TO 130
0054      WRITE (6,90) (IASTR(I),I=1,32) * ((IACQDT(I,J),I=1,2),J=M,N),
      1 (IASTR(I),I=1,32)
0055      90 FORMAT (/,.1X,31A4,A1,/.1X,*,*,10X,*,*,ACQ1 ',A4,A2,9X,*,*,10X,
      1 ACQ2 ',A4,A2,9X,*,*,10X,*,*,ACQ3 ',A4,A2,9X,*,*,
      2 10X,*,*,ACQ4 ',A4,A2,9X,*,*,/.1X,31A4,A1,
      3 /.1X,*,*,30X,*,*,30X,*,*,30X,*,*,30X,*,*,)
0056      WRITE (6,95)
0057      95 FORMAT (1X,*) ** GREEN BRIGHT DOT LINE//.2X,
      1 ** GREEN BRIGHT DOT LINE//.2X,
      2 ** GREEN BRIGHT DOT LINE//.2X,
      3 ** GREEN BRIGHT DOT LINE//.2X,*)
0058      WRITE (6,96) (IASTR(I),I=1,32)
0059      96 FORMAT (1X,*) ** NO. NFSS NO. PIXEL'.2X,*,*,
      1 ' NO. NFSS NO. PIXEL'.2X,*,*,
      2 ' NO. NFSS NO. PIXEL'.2X,*,*,
      3 ' NO. NFSS NO. PIXEL'.2X,*,*,/.1X,*,*,30X,*,*,30X,*,*,30X,*,*,
      4 *,*,30X,*,*,/.1X,31A4,A1,/.1X,*,*,30X,*,*,30X,*,*,30X,*,*,30X,*,*,
      5 *)
      GO TO 200
0060    130 WRITE (3,990)
0061      990 FORMAT (' INVALID NUMBER OF ACQUISITIONS')
0062      NOPGES = NOPGES + 1
0063      RETURN
0064      FND
0065

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LIS03900
 LIS03910
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PAGE 0003

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*OPTIONS IN FFFCT* ID.EBCDIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
*OPTIONS IN FFFCT* NAME = TITLE . LINECNT = 75
*STATISTICS* SOURCE STATEMENTS = 65.PROGRAM SIZE = 3492
*STATISTICS* NO DIAGNOSTICS GENERATED
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FORTRAN IV G LEVEL 21

HEADIV

DATE = 80157

14/49/51

PAGE 0001

FILE LISTGRN

PURDUE / LAPS 3031

0001

SUBROUTINE HEADIV

LIS04440

C
C
C
C
C
C
C
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C
C

PURPOSE: WRITE REPORT HEADING

LIS04450

LIS04460

LIS04470

LIS04480

LIS04490

LIS04500

LIS04510

LIS04520

LIS04530

LIS04540

LIS04550

LIS04560

LIS04570

0002

WRITE (6,100)

0003

C

100 FORMAT (1H1,60X,'TABLE IV', //, 56X, 'ORDERED BY GREEN NUMBER', //)

0004

RETURN

0005

END

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FORTRAN IV S LEVEL 21
FILE LISTGRN

HEADIV

DATE = 80157

14/49/51

PAGE 0002

PURDUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TRCOK#	90						
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
100	94						

OPTIONS IN EFFECT ID.FRCNIC.SOURCE.NOLIST.DECK.NOLGAD.MAP
OPTIONS IN EFFECT NAME = HEADIV * LINECNT = 75
STATISTICS SOURCE STATEMENTS = 5.PROGRAM SIZE = 324
STATISTICS NO DIAGNOSTICS GENERATED

FILE LISTGRN

PURDIE / LARS 3031

```

0001      SUBROUTINE READAT
C
C      PURPOSE: READ AI'S FILE FOR LATER COMPARISON
0002      COMMON /LIST/LIST(999.5), NODOTS, NOCLS, ISMELS(30)
C
0003      COMMON /INFO/NOTE(I), NUMLRL, IUDATE(4,10), LRLDAT(999.5), LSTTOT
0004      1, NOTE(4), NIUDATE
C      COMMON /MISC/NOACO, INSOIL(6), IACQNT(2,6), AI(5), NMFILE(2), SEGM,
0005      1 DATE(4), IGRIDR(5), IGRIDN(5), NOPGFS
C
0006      DATA IFND/'*FND'/
0006      DATA IRLNK/' '/
C
C      READ NUMBER OF DOTS
C
0007      NIUDATE = 0
0008      READ (29,10) LSTTOT,NOTE
0009      10 FORMAT (I4,A4)
C
0010      NUMLRL = 0
C      READ DOT RECORDS
C
0011      NODOTS = 1
0012      5 READ (29,20,FND=1000) (LRLDAT(NODOTS,J),J=1,5)
0013      20 FORMAT (A4,4I4)
C
C      CHECK FOR FND
C
0014      IF (LRLDAT(NODOTS,1) .EQ. IFND) GO TO 100
C
C      CHECK FOR NONBLANK LABEL AND COUNT
0015      IF (LRLDAT(NODOTS,1) .NE. IRLNK) NUMLRL = NUMLRL + 1
C
0016      NODOTS = NODOTS + 1
0017      GO TO 5
C
0018      100 NODOTS = NODOTS - 1
0019      WRITE (3,996) NODOTS
0020      996 FORMAT (1X,' NODOTS = ',I5)
C
C      READ THE REMAINDER OF INFORMATION ON AI'S FILE
C
C
C
C      READ BEGINNING AND ENDING ADDRESSES FOR EACH GRID
C
0021      READ (29,30,FND=1000) (NOTE(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5)
0022      30 FORMAT (4A4,5(I4,1X,I4,2X))
0023      WRITE (3,998) (NOTE(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5)
0024      998 FORMAT (1X,4A4,5(I4,1X,I4,2X))
0025      NIUDATE = NIUDATE + 1
0026      IF (NIUDATE .GT. 10) GO TO 900
0027      READ (29,40,FND=900) (IUDATE(I,NIUDATE),I=1,4)
0028      40 FORMAT (4A4)
0029      GO TO 200
0030      900 NIUDATE = NIUDATE - 1
0031      1000 RETURN
0032      FND

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LIS04540
LIS04540
LIS04600
LIS04610
LIS04620
LIS04630
LIS04640
LIS04650
LIS04660
LIS04670
LIS04680
LIS04690
LIS04700
LIS04710
LIS04720
LIS04730
LIS04740
LIS04750
LIS04760
LIS04770
LIS04780
LIS04790
LIS04800
LIS04810
LIS04820
LIS04830
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LIS04890
LIS04900
LIS04910
LIS04920
LIS04930
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LIS04950
LIS04960
LIS04970
LIS04980
LIS04990
LIS05000
LIS05010
LIS05020
LIS05030
LIS05040
LIS05050
LIS05060
LIS05070
LIS05080
LIS05090
LIS05100
LIS05110
LIS05120
LIS05130
LIS05140
LIS05150

FORTRAN IV G LEVEL 21
FILE LISTGRN

PFADAI

DATE = 80157

14/49/51

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PURDUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	COMMON BLOCK /LIST	SYMBOL	MAP SIZE	4ERC	SYMBOL	LOCATION	SYMBOL	LOCATION
LIST	0	MONOTS	LOCATION 4F0C	NOTES	LOCATION 4E10		ISMRLS	4E14		
SYMBOL	LOCATION	SYMBOL	COMMON BLOCK /INFO	SYMBOL	MAP SIZE	4EER	SYMBOL	LOCATION	SYMBOL	LOCATION
NOTE	0	NUMRL	LOCATION 20	INDATE	LOCATION 24		LBLDAT	C4	LSTTOT	4E00
NOTE1	4ED4	NUMRL	LOCATION 4FF4							
SYMBOL	LOCATION	SYMBOL	COMMON BLOCK /MISC	SYMBOL	MAP SIZE	AR	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACQ	0	INSOIL	LOCATION 4	IACQNT	LOCATION 1C		AI	4C	NMFILE	00
SFGM	6A	DATE	6C	IGRIDR	7C		IGRIDN	90	NOPGES	A4
SYMBOL	LOCATION	SYMBOL	SURPROGRMS CALLED	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
TRCOMM	F0		LOCATION							
SYMBOL	LOCATION	SYMBOL	SCALAR MAP	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
TFND	F4	TRLNK	LOCATION FR	J	FC		I	100		
SYMBOL	LOCATION	SYMBOL	FORMAT STATEMENT MAP	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
10	104	20	LOCATION 10C	996	114		30	126	998	137
40	14A									

OPTIONS IN EFFECT ID.EPCNT, SOURCE, NOLIST, DECK, NOLOAD, MAP
 OPTIONS IN EFFECT NAME = PFADAI, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 32, PROGRAM SIZE = 1162
 STATISTICS NO DIAGNOSTICS GENERATED
 STATISTICS NO DIAGNOSTICS THIS STEP

184

C PURPOSE: PRINT TABLE IV -- ORDERED BY GREEN NUMBER

FORMAT OF INPUT FILE

AT LABEL, LINE NUMBER, SAMPLE, CLUSTER INDEX
LIST

DESCRIPTION OF VARIABLES

DATA READ FROM INPUT FILE IS--(SEGMENT NUMBER) P1414

LIST(1) LABEL, LINE NUMBER, SAMPLE, ORG CLUSTER INDEX, BLANK)
 NODOTS--NUMBER OF DOTS

BUFFER

DATA--LINE OF DATA (106 PIXELS X 16 CHANNELS)

POINTERS TO CURRENT VALUES

LINE#--CURRENT LINE NUMBER

KOLUMN--CURRENT SAMPLE NUMBER

```
COMMON /LIST/ LIST(999.5), NDDOTS, NOCLS, ISM8LS(30)
```

0002 COMMON/BUFFER/IDATA(3200),LINE NO.,COLUMN

COMMON/RADIAN/NOCHAM.IGWFFN, IRRIT, IDOTRD(999,16)

```
COMMON/MISC/NOACO,INSOIL(6),IACORT(2*6),AI(5),NMFILE(2),SEGH,  
1 DATE(4),IGRIDR(5),IGRIDN(5),NOPRES
```

```
0005 COMMON /INFO/NOTE(9),NUMLRL,IUDATE(4,10),LRLDAT(999,5),LSTTOT
1 .NOTE1(4),NUDATE
```

0006 COMMON /REPORT/IAC01(999,6),IAC02(999,6),IAC03(999,6),IAC04(999,6)

0007 COMMON /WHDATE/KFDATE,KLDATE

DATA ISRTW1/3/.ISRTW2/4/

```
0009      C ***** DEFINE FILE TO BE 117 RECORDS OF 2400 WORDS EACH ***
          C      DEFINE FILE 25(117, 2400, U, ID)
```

INITIAL 17F

0010 CALL SETPID

0011 IF (NOCHAN .GT. 12) WRITE(3,9990)

0012 9990 FORMAT (1 INVALID NO OF CHANNELS REQUESTED)

READ LIST OF AI LABFLS, LINE NUMPFRS, SAMPLES, CLUSTERS

0013 CALL READAT

GFT RADIANCE VALUES FOR PIXELS
CALL HDRADN

2015 NUMBER = NOACQ

```
0016      IF (NUMBER .GT. 4) NUMBER = 4
```

SFT BEGINNING AND ENDING INDICES FOR ACQUISITION DATES TO BE PRINTED

0017 KFBATE = 1

```

0017      KRSRTE = 1
0018      KLDATF = NUMRR

```

001A
0010

```

0070      IPRT = 1

```

```

0021      CALL MOVEIT (IACQ)(1,1).NUMRR)

```

MHL 00010
 MHL 00020
 MHL 00030
 MHL 00040
 MHL 00050
 MHL 00060
 MHL 00070
 MHL 00080
 MHL 00090
 MHL 00100
 MHL 00110
 MHL 00120
 MHL 00130
 MHL 00140
 MHL 00150
 MHL 00160
 MHL 00170
 MHL 00180
 MHL 00190
 MHL 00200
 MHL 00210
 MHL 00220
 MHL 00230
 MHL 00240
 MHL 00250
 MHL 00260
 MHL 00270
 MHL 00280
 MHL 00290
 MHL 00300
 MHL 00310
 MHL 00320
 MHL 00330
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 MHL 00370
 MHL 00380
 MHL 00390
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 MHL 00590
 MHL 00600
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 MHL 00620
 MHL 00630
 MHL 00640
 MHL 00650
 MHL 00660
 MHL 00670
 MHL 00680
 MHL 00690
 MHL 00700
 MHL 00710

FILE MULTIHIT

PURQUE / LARS 3031

```

0022      CALL PISRT (IAC01(1.1),ISRTW2)
0023      CALL PISRT (IAC01(1.1),ISRTW1)
0024      CALL MATCH (IAC01, LSTTOT, MAXNDX)

C
0025      IF (NUMRR.LT.2) GO TO 200
0026      IGRFFN = 4
0027      IRPIT = 3
0028      CALL MOVEIT(IAC02(1.1),NUMRR)
0029      CALL PISRT (IAC02(1.1),ISRTW2)
0030      CALL PISRT (IAC02(1.1),ISRTW1)
0031      CALL MATCH (IAC02, LSTTOT, KURRNT)
0032      IF (KURRNT.GT. MAXNDX) MAXNDX = KURRNT

C
0033      IF (NUMRR.LT.3) GO TO 200
0034      IGRFFN = 4
0035      IRPIT = 5
0036      CALL MOVEIT(IAC03(1.1),NUMRR)
0037      CALL PISRT (IAC03(1.1),ISRTW2)
0038      CALL PISRT (IAC03(1.1),ISRTW1)
0039      CALL MATCH (IAC03, LSTTOT, KURRNT)
0040      IF (KURRNT.GT. MAXNDX) MAXNDX = KURRNT

C
0041      IF (NUMRR.LT. 4) GO TO 200

C
0042      IGRFFN = 8
0043      IRPIT = 7
0044      CALL MOVEIT (IAC04(1.1),NUMRR)
0045      CALL PISRT (IAC04(1.1),ISRTW2)
0046      CALL PISRT (IAC04(1.1),ISRTW1)
0047      CALL MATCH (IAC04, LSTTOT, KURRNT)
0048      IF (KURRNT.GT. MAXNDX) MAXNDX = KURRNT

C WRITE GRID REPORT
200      KFFP = LSTTOT
0049      LSTTOT = MAXNDX
0050      CALL REPRGR (NUMRR)
0051

C
C IF MORE THAN 4 ACQUISITIONS THEN WRITE REMAINING
C
0052      IF (NOACQ.LE.4) GO TO 400

C
0053      LSTTOT = KFFP
0054      NUMRR = NOACQ - 4

C
C SET INDICES FOR ACQUISITION DATES BASED ON NUMBER OF ACQUISITIONS
C
0055      KEDATE = 5
0056      KEDATE = NOACQ

C
C ZERO FIRST AND SECOND ACQUISITION RUFFER
C
0057      DO 300 I=1.6
0058      DO 300 J=1.999
0059      IAC01(J,I) = 0
0060      300 IAC02(J,I) = 0

C
C COMPLETE PROCESSING OF REMAINING ACQUISITIONS
C
0061      LSTTOT = 209
0062      IGRFFN = 10
0063      IRPIT = 9
0064      CALL MOVEIT (IAC01(1.1),NUMRR)
0065      CALL PISRT(IAC01(1.1),ISRTW2)
0066      CALL PISRT(IAC01(1.1),ISRTW1)
0067      CALL MATCH (IAC01, NOACQ, MAXNDX)

C
0068      IF (NOACQ.LE. 5) GO TO 350
0069      IGRFFN = 12

```

MUL00720
MUL00730
MUL00740
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MUL00830
MUL00840
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MUL00990
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MUL01110
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MUL01200
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MUL01230
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MUL01250
MUL01260
MUL01270
MUL01280
MUL01290
MUL01300
MUL01310
MUL01320
MUL01330
MUL01340
MUL01350
MUL01360
MUL01370
MUL01380
MUL01390
MUL01400
MUL01410
MUL01420

FORTAN IV G LEVEL 21
FILE MULTIMT

MULTIMT DATE = 80157
PURDUE / LARS 3031

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```
0070      IRRIT = 11
0071      CALL MODFIT (IACQ2(1,1),NUMRR)
0072      CALL PLSRT (IACQ2(1,1),ISRTW2)
0073      CALL PLSRT (IACQ2(1,1),ISRTW1)
0074      CALL MATCH (IACQ2, LSTTOT, KURRNT)
0075      IF (KURRNT .GT. MAXNDX) MAXNDX = KURRNT

C
C  WRITE REMAINING REPORT
C
0076      350  LSTTOT = MAXNDX
0077          CALL REPRGR (NUMRR)
0078          400  CONTINUE
0079          STOP
0080          END
```

MUL01430
MUL01440
MUL01450
MUL01460
MUL01470
MUL01480
MUL01490
MUL01500
MUL01510
MUL01520
MUL01530
MUL01540
MUL01550
MUL01560

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FORTRAN IV G LEVEL 21
FILE MULTIHIT

MULTIHIT DATE = 00157
PIRDIIE / LARS 3031

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SYMBOL LIST	LOCATION 0	COMMON BLOCK /LIST SYMBOL NOODTS	LOCATION 4F0C	MAP SYMBOL NOCLS	SIZE LOCATION 4F10	4F0C	SYMBOL ISMRLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL IDATA	LOCATION 0	COMMON BLOCK /RUEFFER SYMBOL LINEFO	LOCATION 1200	MAP SYMBOL KOLUHN	SIZE LOCATION 3204	320R	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK /RADIAN SYMBOL IGREEN	LOCATION 4	MAP SYMBOL IRBIT	SIZE LOCATION R	4F0C	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL NOACO SEGM	LOCATION 0 6R	COMMON BLOCK /MISC SYMBOL LNSOIL DATE	LOCATION 4 4C	MAP SYMBOL IACOT IGUIDR	SIZE LOCATION 1C 7C	AR	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL NOTE NOTE1	LOCATION 0 4ED4	COMMON BLOCK /INFO SYMBOL NUMRL NUDATE	LOCATION 20 4FF4	MAP SYMBOL IUDATE	SIZE LOCATION 24	4EFF	SYMBOL LBLDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4F00
SYMBOL IACQ1	LOCATION 0	COMMON BLOCK /REPORT SYMBOL IACQ2	LOCATION 50AR	MAP SYMBOL IACQ3	SIZE LOCATION R550	175A0	SYMBOL IACQ4	LOCATION 11H8	SYMBOL	LOCATION
SYMBOL KDATE	LOCATION 0	COMMON BLOCK /WHDATE SYMBOL KDATE	LOCATION 4	MAP SYMBOL	SIZE LOCATION	R	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL DIOSM MOVET	LOCATION 110 124	SUBPROGRAMS CALLED SYMBOL SETP10 PILOT	LOCATION 114 12R	SYMBOL IRCONV MATCH	LOCATION 11R 12C		SYMBOL PFANDI REPRD	LOCATION 11C 130	SYMBOL RDHADN	LOCATION 120
SYMBOL ISPTW1 KIRPNT	LOCATION 214 22R	SCALAR MAP SYMBOL ISPTW2 KFFP	LOCATION 21R 22C	SYMBOL ID I	LOCATION 21C 230		SYMBOL NUMRR J	LOCATION 220 234	SYMBOL MAXNOX	LOCATION 224
SYMBOL 9990	LOCATION 23R	FORMAT STATEMENT MAP SYMBOL	LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT ID,FRONTIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = MULTIHIT, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 80, PROGRAM SIZE = 192R
 STATISTICS NO DIAGNOSTICS GENERATED

FILE MULTIMT

PIMDUE / LARS 3031

0001	C	SUBROUTINE RDRADN	MUL01570
	C	PURPOSE: READ RADIANCE VALUES FOR SELECTED PIXELS	MUL01580
	C		MUL01590
0002	C	COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)	MUL01600
0003	C	COMMON /INFO/NOTE(8), NUMLRL, IUDATE(4,10), LRLDAT(999,5), LSTTOT	MUL01610
	C	1, NOTE(4), NUDATE	MUL01620
0004	C	COMMON/MISC/NOACQ, LNSOIL(6), IACODT(2,6), AI(5), NMFILE(2), SEGM,	MUL01630
	C	1 DATE(4), IGRIDR(5), IGRION(5), NOPGES	MUL01640
0005	C	COMMON/BUFFER/IDATA(3200), LINFNO, KOLIMN	MUL01650
	C		MUL01660
0006	C	COMMON/RADIAN/NOCHAN, IGREEN, IRRIT, IDOTRD(999,16)	MUL01670
	C		MUL01680
0007	C	SFT LAST LINE TO RE 0	MUL01690
	C	LSTLNF = 0	MUL01700
0008	C	SFT LINE SIZE TO RE 196 PIXELS * NUMBER OF CHANNELS	MUL01710
	C	LINES7 = 196 * NOCHAN	MUL01720
	C	READ LINES OF VALUES FOR EACH PIXEL AND SAVE RADIANCE VALUES	MUL01730
0009	C	DO 1000 I = 1, NODOTS	MUL01740
0010	C	LINFNO = LRLDAT(I,2)	MUL01750
0011	C	KOLIMN = LRLDAT(I,3)	MUL01760
0012	C	IF (LINFNO .EQ. LSTLNF) GO TO 100	MUL01770
0013	C	IF (LINFNO .EQ. 0) GO TO 1000	MUL01780
	C		MUL01790
0014	C	NEW LINE, READ LINE OF DATA	MUL01800
0015	C	READ (25*LINFNO) (IDATA(J), J=1, LINES7)	MUL01810
	C	LSTLNF = LINFNO	MUL01820
	C	MOVE DATA TO IDOTRD	MUL01830
0016	C	INDEX = KOLIMN	MUL01840
0017	C	DO 200 L = 1, NOCHAN	MUL01850
0018	C	LL = L	MUL01860
0019	C	NDEX = LL/2	MUL01870
0020	C	IF (MOD(LL,2) .EQ. 0) IDATA(INDEX) = IDATA(INDEX) - LNSOIL(NDEX)	MUL01880
0021	C	IDOTRD(I,L) = IDATA(INDEX)	MUL01890
0022	C	200 INDEX = INDEX + 196	MUL01900
	C		MUL01910
0023	C	1000 CONTINUE	MUL01920
0024	C	RETURN	MUL01930
0025	C	END	MUL01940

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FORTRAN IV G LEVEL 21
FILE MULTIHIT

RORADN

DATE = 90157

14/33/20

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PURDUE / LARS 3031

SYMBOL LIST	LOCATION 0	COMMON BLOCK /LIST LOCATION 4FRC	SYMBOL NODOTS	/ MAP LOCATION 4F10	SIZE 4FRC	SYMBOL ISMRLS	LOCATION 4E14	SYMBOL LOCATION
SYMBOL NOTE NOTE1	LOCATION 0 4F04	COMMON BLOCK /INFO LOCATION 20 4FF4	SYMBOL NUMRL NUMDATE	/ MAP LOCATION 24	SIZE 4EER	SYMBOL LBLOAT	LOCATION C4	SYMBOL LSTTOT LOCATION 4E00
SYMBOL NOACQ SEGM	LOCATION 0 6A	COMMON BLOCK /MISC LOCATION 4 AC	SYMBOL LNSOIL DATE	/ MAP LOCATION 1C 7C	SIZE AR	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NORGES LOCATION 60 A4
SYMBOL TDATA	LOCATION 0	COMMON BLOCK /BUFFER LOCATION 4200	SYMBOL LINFNO	/ MAP LOCATION 3204	SIZE 320R	SYMBOL LOCATION	LOCATION	SYMBOL LOCATION
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK /RADIAN LOCATION 4	SYMBOL IGREEN	/ MAP LOCATION R	SIZE F9CC	SYMBOL IDOTRO	LOCATION C	SYMBOL LOCATION
SYMBOL TACOMM	LOCATION DR	SUBPROGRAMS CALLED LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	LOCATION	SYMBOL LOCATION
SYMBOL LSTLNF I	LOCATION F4 FA	SCALAR MAP LOCATION FA FC	SYMBOL LINESZ LL	SYMBOL I INDEX	LOCATION EC 100	SYMBOL J	LOCATION F0	SYMBOL INDEX LOCATION F4

OPTIONS IN EFFECT ID,ERCNT,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = RORADN * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 25,PROGRAM SIZE = 794
 STATISTICS NO DIAGNOSTICS GENERATED

FILE MULTIHIT

PURDUE / LARS 3031

```

0001      SUBROUTINE MOVFIT (ITEMP,NUMRR)
C
C      PURPOSE:  MOVE INFORMATION FROM INPUT FILES TO HOLD AREA FOR SORTING
C
0002      COMMON /INFO/NOTE(9),NUMRL,TDATE(4,10),LRLDAT(999,5),LSTTOT
C      1,NOTE1(4),NIIDATE
C
0003      COMMON /LIST/ LIST(999,4), NDDOTS, NOCLS + ISMRLS(30)
C
0004      COMMON/RADIAN/NOCHAN,IGREEN, IRRIT, IDOTPD(999,16)
C
0005      DIMENSION ITEMP(999,6)
C
C      MOVE DATA TO HOLD AREA FOR SORTING
C
0006      NDEX = 0
C
0007      DO 100 I = 1,NDDOTS
C
C      DO NOT STORE ZERO LINE OR SAMPLE
C
0008      IF (LRLDAT(I,2).EQ.0 .OR. LRLDAT(I,3).EQ.0) GO TO 100
0009      NDEX = NDEX + 1
0010      ITEMP(NDEX,1) = LRLDAT(I,2)
0011      ITEMP(NDEX,2) = LRLDAT(I,3)
0012      ITEMP(NDEX,3) = IDOTPD(I,IGREEN)
0013      ITEMP(NDEX,4) = IDOTPD(I,IRRIT)
0014      ITEMP(NDEX,5) = LRLDAT(I,1)
C
C      CALCULATE DOT NUMBER BASED ON LIST AND STORE
C
0015      CALL CALDOT(LRLDAT(I,2),LRLDAT(I,3),IMDOT)
C
C      STORE DOT NUMBER
C
0016      ITEMP(NDEX,6) = IMDOT
C
0017      100 CONTINUE
C
C      SAVE NUMBER OF DATA PIXELS STORED FOR FURTHER PROCESSING
C
0018      LSTTOT = NDEX
C
C      PRINT FOR CHECKOUT
C
0019      RETURN
0020      END

```

MUL 02070
MUL 02080
MUL 02090
MUL 02100
MUL 02110
MUL 02120
MUL 02130
MUL 02140
MUL 02150
MUL 02160
MUL 02170
MUL 02180
MUL 02190
MUL 02200
MUL 02210
MUL 02220
MUL 02230
MUL 02240
MUL 02250
MUL 02260
MUL 02270
MUL 02280
MUL 02290
MUL 02300
MUL 02310
MUL 02320
MUL 02330
MUL 02340
MUL 02350
MUL 02360
MUL 02370
MUL 02380
MUL 02390
MUL 02400
MUL 02410
MUL 02420
MUL 02430
MUL 02440
MUL 02450
MUL 02460
MUL 02470
MUL 02480
MUL 02490
MUL 02500

FORTRAN IV G LEVEL 21
FILE MULTIHIT

MOVEIT

DATE = 80157

14/33/20

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PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / INFO	/ MAP SIZE	4FER	SYMBOL	LOCATION	SYMBOL	LOCATION
NOTE1	0 4ED4	LOCATION 20 4EF4	LOCATION 24		L8LDAT	C4	LSTTOT	4ED0
LIST	0	LOCATION 4EFC	LOCATION 4E10	4ERC	ISMRLS	4E14		LOCATION
NOCHAN	0	LOCATION 4	LOCATION 8	F9CC	IDOTRD	C		LOCATION
CAIDOT	R4	LOCATION	LOCATION		LOCATION			LOCATION
INDEX	C4	LOCATION CA	LOCATION CC		NUMBR	00		LOCATION
ITFMP	D4	LOCATION	LOCATION		LOCATION			LOCATION

OPTIONS IN EFFECT ID.FRCNIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = MOVEIT * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 20, PROGRAM SIZE = 836
 STATISTICS NO DIAGNOSTICS GENERATED

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OF POOR QUALITY

FILE MULTIHIT

PURPOSE / LARS 3031

```

0001      SUBROUTINE REFGRD (NUMRR)
C
C      PURPOSE:  REPORT THE SETS OF LINES NUMBERS, SAMPLES, GREENNESS AND
C                BRIGHTNESS VALUES BY THEIR GRID NUMBER
C
C
0002      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
C
0003      COMMON/MISC/NOACQ,INSOIL(6),IACQDT(2,6),AI(5),NMFILE(2),SEGM,
C      1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES
C
0004      COMMON/INFO/NOTE(8),NUMRL,IUDATE(4,10),LRLEAT(999,5),LSTTOT
C      1,NOTE(4),NIIDATE
0005      COMMON/BUFFER/IODATA(3200),LINENO,KOLUMN
C
0006      COMMON/PLOT/TITLE(20),XLABEL(20),YLABEL(5),NPOINT,X(1000),Y(1000)
C
0007      COMMON/RADIAN/NOCHAN,IGREEN,IPRIT, IODTRD(999,16)
C
C
0008      COMMON /REPORT/IACQ1(999,6),IACQ2(999,6),IACQ3(999,6),IACQ4(999,6)
C
C      WRITE THE TITLE FOR REPORT
C
0009      NOPGES = 0
0010      CALL HEADV
0011      CALL TITLEG (NUMRR)
0012      NUMLIN = 11
C
C      WRITE REPORT DEPENDING ON NUMBER OF ACQUISITIONS
C
0013      IFIRST = 1
0014      LAST = LSTTOT
0015      DO 800 IA=IFIRST,LAST
C
C      COUNT NUMBER OF LINES
C
0016      NUMLIN = NUMLIN + 1
C
0017      100 IF (NUMLIN .LE. 70) GO TO 110
0018      NUMLIN = 8
0019      CALL TITLEG (NUMRR)
C
C      WRITE DATA DEPENDENT ON NUMBER OF ACQUISITIONS TO BE PRINTED
C
0020      110 GO TO (120,140,160,180), NUMRR
C
C      1 ACQUISITION
C
0021      120 WRITE(6,125) IACQ1(IA,3),IACQ1(IA,4),IACQ1(IA,5),IACQ1(IA,6)
C      1,IACQ1(IA,1),IACQ1(IA,2)
0022      125 FORMAT(1X,10I2,2X,A3,4X,A3,3X,A2,A3,2X,A3,1X,A3,1X,10I2)
0023      GO TO 800
C
C      2 ACQUISITIONS
C
0024      140 WRITE(6,145) IACQ1(IA,3),IACQ1(IA,4),IACQ1(IA,5),IACQ1(IA,6)
C      1,IACQ1(IA,1),IACQ1(IA,2),IACQ2(IA,3),IACQ2(IA,4),IACQ2(IA,5),
C      2,IACQ2(IA,6),IACQ2(IA,1),IACQ2(IA,2)
0025      145 FORMAT(1X,10I2,(2X,A3,4X,A3,3X,A2,A3,2X,A3,1X,A3,1X,10I2))
0026      GO TO 800
C
C      3 ACQUISITIONS
C
0027      160 WRITE(6,165) IACQ1(IA,3),IACQ1(IA,4),IACQ1(IA,5),IACQ1(IA,6)
C      1,IACQ1(IA,1),IACQ1(IA,2),IACQ2(IA,3),IACQ2(IA,4),IACQ2(IA,5),
C      2,IACQ2(IA,6),IACQ2(IA,1),IACQ2(IA,2),IACQ3(IA,3),IACQ3(IA,4),
C      3,IACQ3(IA,5),IACQ3(IA,6),IACQ3(IA,1),IACQ3(IA,2)
0028      165 FORMAT (1X,10I2,(2X,A3,4X,A3,3X,A2,A3,2X,A3,1X,A3,1X,10I2))

```

MUL02510
MUL02520
MUL02530
MUL02540
MUL02550
MUL02560
MUL02570
MUL02580
MUL02590
MUL02600
MUL02610
MUL02620
MUL02630
MUL02640
MUL02650
MUL02660
MUL02670
MUL02680
MUL02690
MUL02700
MUL02710
MUL02720
MUL02730
MUL02740
MUL02750
MUL02760
MUL02770
MUL02780
MUL02790
MUL02800
MUL02810
MUL02820
MUL02830
MUL02840
MUL02850
MUL02860
MUL02870
MUL02880
MUL02890
MUL02900
MUL02910
MUL02920
MUL02930
MUL02940
MUL02950
MUL02960
MUL02970
MUL02980
MUL02990
MUL03000
MUL03010
MUL03020
MUL03030
MUL03040
MUL03050
MUL03060
MUL03070
MUL03080
MUL03090
MUL03100
MUL03110
MUL03120
MUL03130
MUL03140
MUL03150
MUL03160
MUL03170
MUL03180
MUL03190
MUL03200

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PIRDNE / LAHS 3031

GO TO END

MIL 03270

333

4. ACQUISITIONS

0030

```
100 WRITE(6,105) IACQ1(TA,3), IACQ1(TA,4), IACQ1(TA,5), IACQ1(TA,6),  
1 IACQ1(TA,1), IACQ1(TA,2), IACQ2(TA,3), IACQ2(TA,4), IACQ2(TA,5),  
2 IACQ2(TA,6), IACQ2(TA,1), IACQ2(TA,2), IACQ3(TA,3), IACQ3(TA,4),  
3 IACQ3(TA,5),  
4 IACQ3(TA,6), IACQ3(TA,1), IACQ3(TA,2), IACQ4(TA,3), IACQ4(TA,4),  
5 IACQ4(TA,5), IACQ4(TA,6), IACQ4(TA,1), IACQ4(TA,2)  
105 FORMAT (1X, '01.4(2X,A3,4X,A3,3X,A2,A3,2X,A3,1X,A3,1X, '01)')
```

MIL 037 10

MIL 03240
MIL 03240MUL 03260
MUL 03260

MUL 03270

03/03/00
03/03/00

03.03.2003

MIL 03319

MIL 03 323
MIL 03 323

411.93 + 0.01
 411.93 + 0.01

MUL 03340

0031

0032

0033
0034

1979 146

AAA CONTINUE

DEF TION
END

4-7413

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FORTRAN IV G LEVEL 21
FILE MULTIMT

REPGRD

DATE = R0157

14/33/20

PAGE 0003

PURDUE / LARS 3031

SYMBOL LIST	LOCATION 0	SYMBOL NODOTS	COMMON BLOCK /LIST LOCATION 4E0C	SYMBOL NOCLS	/ MAP LOCATION 4E10	SIZE 4E0C	SYMBOL ISWRLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL NOACQ SEGM	LOCATION 0 68	SYMBOL INSOIL DATE	COMMON BLOCK /MISC LOCATION 4C	SYMBOL IACQDT IGRIDR	/ MAP LOCATION 7C	SIZE AB 1C 7C	SYMBOL AT IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NORGES	LOCATION 60 A4
SYMBOL NOTE NOTE1	LOCATION 0 4ED4	SYMBOL NUMRL NUMDATE	COMMON BLOCK /INFO LOCATION 20 4FF4	SYMBOL IUPDATE	/ MAP LOCATION 24	SIZE 4E0C 24	SYMBOL LHLOAD	LOCATION C4	SYMBOL LSTTOT	LOCATION 4E00
SYMBOL IATA	LOCATION 0	SYMBOL LINEFO	COMMON BLOCK /BUFFER LOCATION 3200	SYMBOL KOLUMN	/ MAP LOCATION 3204	SIZE 3200	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL TITLE Y	LOCATION 0 105A	SYMBOL XLAHFL	COMMON BLOCK /PLOT LOCATION 50	SYMBOL YLAHFL	/ MAP LOCATION A0	SIZE 1E00 A0	SYMBOL NPOINT	LOCATION 94	SYMBOL X	LOCATION 8A
SYMBOL NOCHAN	LOCATION 0	SYMBOL IGREEN	COMMON BLOCK /RADIAN LOCATION 4	SYMBOL IRPIT	/ MAP LOCATION A	SIZE F00C A	SYMBOL IDGTR	LOCATION C	SYMBOL	LOCATION
SYMBOL IACQ1	LOCATION 0	SYMBOL IACQ2	COMMON BLOCK /REPORT LOCATION 50A0	SYMBOL IACQ3	/ MAP LOCATION 8B50	SIZE 176A0 8B50	SYMBOL IACQ4	LOCATION 11A0	SYMBOL	LOCATION
SYMBOL HEADV	LOCATION 100	SYMBOL TITLEG	SUBPROGRAMS CALLED LOCATION 104	SYMBOL IRCOM4	LOCATION 108		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NUMBP	LOCATION 114	SYMBOL NUMLIN	SCALAR MAP LOCATION 11A	SYMBOL IFIRST	LOCATION 11C		SYMBOL LAST	LOCATION 120	SYMBOL IA	LOCATION 124
SYMBOL 125	LOCATION 12A	SYMBOL 145	FORMAT STATEMENT MAP LOCATION 14A	SYMBOL 165	LOCATION 16F		SYMBOL 185	LOCATION 194	SYMBOL	LOCATION

OPTIONS IN EFFECT ID,ERCDIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = REPGRD * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 34,PROGRAM SIZE = 1676
 STATISTICS NO DIAGNOSTICS GENERATED

FILE MULTIMIT

PURDUE / LARS 3031

```

0001      SUBROUTINE TITLEG (NUMBR)
0002      C
0003      C PURPOSE: WRITES TITLE FOR GREENNESS REPORT
0004      C
0005      COMMON /RADIAN/NOCHAN,IGREEN,IFRIT,INDTRD(999,16)
0006      COMMON/MISC/NOACO,INSOIL(6),IACQNT(2,6),AI(5),NMFILE(2),SEGM,
0007      1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES
0008      C
0009      COMMON /INFO/NOTE(9),NUMLRL,IUNDATE(4,10),LRLDAT(999,5),LSTTOT
0010      1 ,NOTE1(4),NUDATE
0011      COMMON /REPORT/IACQ1(999,6),IACQ2(999,6),IACQ3(999,6),IACQ4(999,6)
0012      C
0013      COMMON /WHDATE/XFDATE,KLDATE
0014      C
0015      LOGICAL*1 ASTRSK(128)
0016      EQUIVALENCE ((IASTR(1)),ASTRSK(1))
0017      DIMENSION IASTR(32)
0018      DIMENSION IHEAD(4)
0019      DIMENSION IATEMP(2)
0020      DATA IHEAD/'ACQ1','ACQ2','ACQ5','ACQ6'/
0021      DATA ASTRSK/128*'H'/
0022      C
0023      C SET BEGINNING AND ENDING ACQUISITION DATE TO SHORTER NAME FOR INDEXING
0024      C
0025      M = XFDATE
0026      N = KLDATE
0027      C
0028      C STORE APPLICABLE ACQUISITION TITLE TO BE PRINTED
0029      C
0030      IATEMP(1) = IHEAD(1)
0031      IATEMP(2) = IHEAD(2)
0032      IF (KFDATE .EQ. 1) GO TO 5
0033      IATEMP(1) = IHEAD(3)
0034      IATEMP(2) = IHEAD(4)
0035      C
0036      5 CONTINUE
0037      IF (NOPGES .NE. 0) GO TO 10
0038      WRITE (6,20) SEGM,DATE
0039      20 FORMAT (1X,'SEGMENT = ',A4,21X,'DATE GENERATED = ',A44)
0040      GO TO 25
0041      10 WRITE (6,30) SEGM,DATE
0042      30 FORMAT (1H,'SEGMENT = ',A4,21X,'DATE GENERATED = ',A44)
0043      C
0044      C 1 ACQUISITION
0045      C
0046      25 IF (NUMBR.NE.1) GO TO 100
0047      WRITE (6,60) (IASTR(I),I=1,8),IATEMP(1),((IACQNT(I,M),I=1,2),
0048      6 (IASTR(I),I=1,4)
0049      60 FORMAT (1X,15A4,1X,10X,A4,1X,A4,A2,9X,10X,A4,1X,
0050      1 /,1X,10X,10X,10X)
0051      WRITE (6,65)
0052      65 FORMAT (1X,10 GREEN BRIGHT LABEL/ LINE/1,2X,10X)
0053      WRITE (6,66) (IASTR(I),I=1,8)
0054      66 FORMAT (1X,10 NO. NESS COUNT PIXEL,2X,10X,10X,30X,10X)
0055      1 /,1X,A4,1X,15A4,A3,1X,10X,10X,30X,10X)
0056      GO TO 200
0057      C
0058      C 2 ACQUISITIONS
0059      C
0060      100 IF (NUMBR.NE.2) GO TO 110
0061      C
0062      C CALCULATE INDEX FOR SECOND DATE
0063      C
0064      MM = M + 1
0065      WRITE (6,70) (IASTR(I),I=1,16),IATEMP(1),((IACQNT(I,M),I=1,2),
0066      1 IATEMP(2),((IACQNT(I,MM),I=1,2),((IASTR(I),I=1,16)
0067      70 FORMAT (1X,15A4,A3,1X,10X,A4,1X,A4,A2,9X,10X,A4,1X,
0068      1 /,A4,A2,9X,10X,10X,15A4,A3,1X,10X,10X,30X,10X)
0069      WRITE (6,75)
0070      75 FORMAT (1X,10 GREEN BRIGHT LABEL/ LINE/1,2X,

```

MUL 03 069
MUL 03 370
MUL 03 400
MUL 03 390
MUL 03 400
MUL 03 410
MUL 03 420
MUL 03 430
MUL 03 440
MUL 03 450
MUL 03 460
MUL 03 470
MUL 03 480
MUL 03 490
MUL 03 500
MUL 03 510
MUL 03 520
MUL 03 530
MUL 03 540
MUL 03 550
MUL 03 560
MUL 03 570
MUL 03 580
MUL 03 590
MUL 03 600
MUL 03 610
MUL 03 620
MUL 03 630
MUL 03 640
MUL 03 650
MUL 03 660
MUL 03 670
MUL 03 680
MUL 03 690
MUL 03 700
MUL 03 710
MUL 03 720
MUL 03 730
MUL 03 740
MUL 03 750
MUL 03 760
MUL 03 770
MUL 03 780
MUL 03 790
MUL 03 800
MUL 03 810
MUL 03 820
MUL 03 830
MUL 03 840
MUL 03 850
MUL 03 860
MUL 03 870
MUL 03 880
MUL 03 890
MUL 03 900
MUL 03 910
MUL 03 920
MUL 03 930
MUL 03 940
MUL 03 950
MUL 03 960
MUL 03 970
MUL 03 980
MUL 03 990
MUL 04 000
MUL 04 010
MUL 04 020
MUL 04 030
MUL 04 040
MUL 04 050
MUL 04 060
MUL 04 070
MUL 04 080
MUL 04 090
MUL 04 100

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0042      1 * GREEN RIGHT LABEL/ LINE//.2X.***)
0043      74 WRITE (6,74) ((I=1,16)
1 * NO. NFSS COUNT PIXEL*.2X.***.
1 * NO. NFSS COUNT PIXEL*.2X.***/.1X.***.30X.***.30X.***.
1 *.1X.15A4.A3/.1X.***.30X.***.30X.***)
0044      GO TO 200
C
C 3 ACQUISITIONS
0045      110 IF (NUMRP.NF.3) GO TO 120
0046      WRITE (6,80) ((I=1,24) ((IACONT(I,J).I=1,2).J=M,N)
1 * ((I=1,24)
0047      80 FORMAT (/,.1X.23A4.A2.
1 *.1X.***.10X.***.ACQ1 *.A4.A2.9X.***.10X.***.ACQ2 *.
2 *.A4.A2.9X.***.10X.***.ACQ3 *.A4.A2.9X.***.
3 *.1X.23A4.A2/.1X.***.30X.***.30X.***.30X.***.
0048      WRITE (6,85)
0049      85 FORMAT(1X.*** GREEN RIGHT LABEL/ LINE//.2X.
1 * GREEN RIGHT LABEL/ LINE//.2X.
2 * GREEN RIGHT LABEL/ LINE//.2X.***)
0050      WRITE (6,86) ((I=1,24)
0051      86 FORMAT(1X.*** NO. NFSS COUNT PIXEL*.2X.***.
1 * NO. NFSS COUNT PIXEL*.2X.***/.1X.***.30X.***.30X.***.30X.***
2 * NO. NFSS COUNT PIXEL*.2X.***/.1X.***.30X.***.30X.***.30X.***
1 * NO. NFSS COUNT PIXEL*.2X.***/.1X.***.30X.***.30X.***.30X.***)
0052      GO TO 200
C
C 4 ACQUISITIONS
0053      120 IF (NUMRP.NF.4) GO TO 130
0054      WRITE (6,90) ((I=1,32) ((IACONT(I,J).I=1,2).J=M,N)
1 * ((I=1,32)
0055      90 FORMAT(/,.1X.31A4.A1/.1X.***.10X.***.ACQ1 *.A4.A2.9X.***.10X.
1 *.ACQ2 *.A4.A2.9X.***.10X.***.ACQ3 *.A4.A2.9X.***.
2 *.10X.***.ACQ4 *.A4.A2.9X.***/.1X.31A4.A1.
3 *.1X.***.30X.***.30X.***.30X.***.30X.***)
0056      WRITE (6,95)
0057      95 FORMAT(1X.*** GREEN RIGHT LABEL/ LINE//.2X.
1 * GREEN RIGHT LABEL/ LINE//.2X.
2 * GREEN RIGHT LABEL/ LINE//.2X.
3 * GREEN RIGHT LABEL/ LINE//.2X.***)
0058      WRITE (6,96) ((I=1,32)
0059      96 FORMAT(1X.*** NO. NFSS COUNT PIXEL*.2X.***.
1 * NO. NFSS COUNT PIXEL*.2X.***.
2 * NO. NFSS COUNT PIXEL*.2X.***.
3 * NO. NFSS COUNT PIXEL*.2X.***/.1X.***.30X.***.30X.***.30X.***
4 * NO. NFSS COUNT PIXEL*.2X.***/.1X.***.30X.***.30X.***.30X.***.30X.***
5 * NO. NFSS COUNT PIXEL*.2X.***/.1X.***.30X.***.30X.***.30X.***.30X.***)
0060      GO TO 200
0061      130 WRITE (7,990)
0062      990 FORMAT (1 * INVALID NUMRP OF ACQUISITIONS)
0063      200 NPGES = NPGES + 1
0064      RETURN
0065      END

```

MIL 04070
MIL 04080
MIL 04090
MIL 04100
MIL 04110
MIL 04120
MIL 04130
MIL 04140
MIL 04150
MIL 04160
MIL 04170
MIL 04180
MIL 04190
MIL 04200
MIL 04210
MIL 04220
MIL 04230
MIL 04240
MIL 04250
MIL 04260
MIL 04270
MIL 04280
MIL 04290
MIL 04300
MIL 04310
MIL 04320
MIL 04330
MIL 04340
MIL 04350
MIL 04360
MIL 04370
MIL 04380
MIL 04390
MIL 04400
MIL 04410
MIL 04420
MIL 04430
MIL 04440
MIL 04450
MIL 04460
MIL 04470
MIL 04480
MIL 04490
MIL 04500
MIL 04510
MIL 04520
MIL 04530
MIL 04540
MIL 04550
MIL 04560
MIL 04570
MIL 04580
MIL 04590
MIL 04600

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SYMBOL	LOCATION	COMMON BLOCK	/RADIAN	/MAP	SIZE	F4CC	SYMBOL	LOCATION	SYMBOL	LOCATION
NOCHAN	0	IGREFFN	4	IRGIT	R		IDOTPD	C		
NOACQ	0	ENSOIL	4	IACQNT	1C		AT	4C	NOFILE	40
SFGM	6R	DATE	4C	IGRIDR	7C		IGRIDN	90	NOPGES	24
NOTE	0	NUMRL	20	IUPDATE	24		LRLDAT	C4	LSTTOT	4700
NOTE1	4FD4	NUMRL	4FF4							
IACQ1	0	IACQ2	50AR	IACQ3	8B50		IACQ4	11AFR		
KFOATE	0	KLOATE	4							
IACOM	15R									
IATR	160	ASTWSK	160							
N	1F0	N	1F4	NUMRR	1ER		I	1FC	MR	1F0
THEAD	1FR	TATMP	20R							
20	210	30	27R	40	267	65	297	66	40	24F
70	2F9	75	341	76	3RA	80	3FE	85	253	
86	4C0	90	5AF	95	5EA	96	675	990	243	

```
*OPTIONS IN EFFECT* ID,ERCDC,SOURCE,NOIST,DECK,NOLoad,MAP
*OPTIONS IN EFFECT* NAME = TITLE * LINECNT = 75
*STATISTICS* SOURCE STATEMENTS = 65,PROGRAM SIZE = 3492
*STATISTICS* NO DIAGNOSTICS GENERATED
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PURDUE / LARS 3031

MUL 04410

MUL 04470

MIL 04630

MUL 04n.40

MIL 04-550

0444

MUL 04-70

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MIL 04-00

● 04 7-98

MUL 04 / 13
MUL 04 / 13MIL-04-723
 APR 06 2 23 PMMUL 64 7 33
MUL 64 7 33MIL 94-140
MIL 94-250MIL 0-750
MIL 0-750

417.0-74-9
417.0-77-0

MD 04770

100 FORMAT (1H1,60X,'TABLE V',//,56X,'MULTIPLE HIT TABLE',//)

WQTF (6.110)

110 FORMAT (1X,54X,'(ORDERED BY GREEN NUMBER)'.//,55X,

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1  *ANALYST*,GX,*LAFLEED*,//)
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DEFINITION

FND)

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FORTRAN IV G LEVEL 21
 FTIF MIJL*IHIT

HEADV

DATE = 80157

14/33/20

PAGE 0002

PUPQUE / LARS 3031

		SUBPROGRAMS CALLED							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
FROMM	90								
		FORMAT STATEMENT MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
100	94	110	9F						

OPTIONS IN EFFECT ID,FRONTIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = HEADV * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 7,PROGRAM SIZE = 392
 STATISTICS NO DIAGNOSTICS GENERATED

PIRDUE / LAQS 3031

[illegible]

FORTRAN IV G LEVEL 21
FILE MULTITH

READAI

DATE = 80157

14/33/20

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PURDUE / LARS 3031

SYMBOL LIST	LOCATION 0	SYMBOL NODOTS	COMMON BLOCK /LIST LOCATION 4E0C	SYMBOL NODLS	/ MAP LOCATION 4E10	SIZE 4E0C	SYMBOL ISMRLS	LOCATION 4E14	SYMBOL LOCATION
SYMBOL NOTE NOTE1	LOCATION 0 4E04	SYMBOL NUMRL NUMDATE	COMMON BLOCK /INFO LOCATION 20 4FF4	SYMBOL INDATE	/ MAP LOCATION 24	SIZE 4FF4	SYMBOL LRLDAT	LOCATION C4	SYMBOL LSTTOT LOCATION 4E00
SYMBOL NOACQ CECM	LOCATION 0 4B	SYMBOL LNSOIL DATE	COMMON BLOCK /MISC LOCATION 4 4C	SYMBOL IACQDT IGRIDR	/ MAP LOCATION 1C 7C	SIZE AR	SYMBOL AT IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES LOCATION 40 A4
SYMBOL TRCONB	LOCATION EA	SYMBOL	SUBPROGRAMS CALLED LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL LOCATION
SYMBOL IFND	LOCATION EC	SYMBOL IBLNK	SCALAR MAP LOCATION F0	SYMBOL J	LOCATION F4		SYMBOL I	LOCATION FB	SYMBOL ICOUNT LOCATION FC
SYMBOL 10 40	LOCATION 100 146	SYMBOL 20	FORMAT STATEMENT MAP LOCATION 108	SYMBOL 996	LOCATION 110		SYMBOL 30	LOCATION 122	SYMBOL 994 LOCATION 133

OPTIONS IN EFFECT IO,FRONTIC,SOURCE,NGLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = READAI * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 31, PROGRAM SIZE = 1146
 STATISTICS NO DIAGNOSTICS GENERATED

202

FORTRAN IV 6 LEVEL 21
FILE MULTITHIT

READAI

DATE = 80157

14/33/20

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PHRASE / LARS 3031

SYMBOL LIST	LOCATION	SYMBOL COMMON BLOCK NOPTS	LOCATION 4F0C	SYMBOL /LIST NOCLS	LOCATION 4E10	SYMBOL / MAP NOCLS	LOCATION 4F10	SYMBOL ISMBLS	LOCATION 4F14	SYMBOL LOCATION
SYMBOL NOTE NOTE1	LOCATION 0 4E04	SYMBOL COMMON BLOCK /INFO NUMBER 20 4F04	LOCATION 4F0C	SYMBOL / MAP INFO 24	LOCATION 4F10	SYMBOL / MAP INFO 24	LOCATION 4F10	SYMBOL LRLDIT	LOCATION C4	SYMBOL LOCATION 4F10
SYMBOL NOACQ CFGM	LOCATION 0 68	SYMBOL COMMON BLOCK /MISC INFO 4 6C	LOCATION 4F0C	SYMBOL / MAP INFO 1C 7C	LOCATION 4F10	SYMBOL / MAP INFO 1C 7C	LOCATION 4F10	SYMBOL AT INFO 4C 9C	LOCATION 4C 9C	SYMBOL LOCATION 4C 9C
SYMBOL TRCON	LOCATION F4	SYMBOL SUPPROGAMS CALLED LOCATION	LOCATION	SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	LOCATION	SYMBOL LOCATION
SYMBOL TRND	LOCATION EC	SYMBOL SCALAR MAP IBLX F0	LOCATION F0	SYMBOL LOCATION J	LOCATION F4	SYMBOL LOCATION F4	LOCATION F4	SYMBOL LOCATION F8	LOCATION F8	SYMBOL LOCATION F8
SYMBOL 10 40	LOCATION 100 146	SYMBOL FORMAT STATEMENT MAP LOCATION 20 108	LOCATION 108	SYMBOL LOCATION 996	LOCATION 110	SYMBOL LOCATION 110	LOCATION 110	SYMBOL LOCATION 30 122	LOCATION 122	SYMBOL LOCATION 996 73

OPTIONS IN EFFECT ID.FRCNIF.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = READAI * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 31 PROGRAM SIZE = 1145
 STATISTICS NO DIAGNOSTICS GENERATED

FILE MULTIMIT

PURDUE / LARS 3031

```

0001      SUBROUTINE MATCH (IACQ,NODOTS,INDEX)      MUL05350
C          PURPOSE  CREATE LIST OF MULTIPLE HITS AND THEIR ASSOCIATED COUNTS      MUL05360
C          DIMENSION IACQ(999,6), IHOLD(999,6)      MUL05370
C          DATA IRLANK/' '/      MUL05380
C          INITIALIZE INDEX TO HOLD AREA AND BEGINNING OF GROUP LOCATION      MUL05390
C          INDEX = 1      MUL05400
C          IFIRST = 0      MUL05410
C          ZERO COUNTS AND BLANK VALUES IN IHOLD      MUL05420
C          DO 10 I = 1,999      MUL05430
C              IHOLD(I,6) = 0      MUL05440
C              DO 10 J = 1,5      MUL05450
C                  IHOLD(I,J) = IRLANK      MUL05460
C          CHECK FILE FOR DUPLICATES      MUL05470
C          DO 1000 I = 1,NODOTS      MUL05480
C              NEXT = I + 1      MUL05490
C              IF (IACQ(I,3).NE.IACQ(NEXT,3).OR.IACQ(I,4).NE.IACQ(NEXT,4)) GO TO 900      MUL05500
C          IS THIS THE FIRST LINE OF THE CURRENT GROUP      MUL05510
C          9991 FORMAT (' IFIRST, INDEX=*,2IS)      MUL05520
C          IF (IFIRST.NE.0) GO TO 300      MUL05530
C          NEW GROUP. SKIP LINE IN IHOLD, UNLESS BEGINNING OF LISTING      MUL05540
C          IF (INDEX.NE.1) INDEX = INDEX + 2      MUL05550
C          DO 200 J = 1,5      MUL05560
C              IHOLD(INDEX,J) = IACQ(I,J)      MUL05570
C              IFIRST = INDEX      MUL05580
C              IHOLD(INDEX,6) = 1      MUL05590
C          MOVE IN VALUES 2-N      MUL05600
C          300 INDEX = INDEX + 1      MUL05610
C          DO 310 J = 1,5      MUL05620
C              IHOLD(INDEX,J) = IACQ(NEXT,J)      MUL05630
C          VALUES MOVED IN. CHECK FOR NEW LABEL      MUL05640
C          IF (IACQ(I,5).EQ.IACQ(NEXT,5)) GO TO 400      MUL05650
C          IFIRST = INDEX      MUL05660
C          400 IHOLD(IFIRST,6) = IHOLD(IFIRST,6) + 1      MUL05670
C          GO TO 1000      MUL05680
C          NON MATCH      MUL05690
C          900 IFIRST = 0      MUL05700
C          1000 CONTINUE      MUL05710
C          STACK CHECKED. MOVE BACK TO IACQ      MUL05720
C          DO 2000 I = 1,999      MUL05730
C              ITHREE = 3      MUL05740
C          DO 2000 J = 1,6      MUL05750
C              IF (J.NE.5) GO TO 1090      MUL05760
C              IACQ(I,J) = IHOLD(I,J)      MUL05770
C              GO TO 2000      MUL05780
C          1090 CALL AFRMIN(IHOLD(I,J),ITHREE,IACQ(I,J))      MUL05790
C          2000 CONTINUE      MUL05800
C          NEXT = INDEX + 1      MUL05810
C          DO 2100 I = NEXT,999      MUL05820
C              IACQ(I,6) = IRLANK      MUL05830
C          RETURN      MUL05840
C          END      MUL05850
0002      MUL05860
0003      MUL05870
0004      MUL05880
0005      MUL05890
0006      MUL05900
0007      MUL05910
0008      MUL05920
0009      MUL05930
0010      MUL05940
0011      MUL05950
0012      MUL05960
0013      MUL05970
0014      MUL05980
0015      MUL05990
0016      MUL06000
0017      MUL06010
0018      MUL06020
0019      MUL06030
0020      MUL06040
0021      MUL06050
0022      MUL06060
0023      MUL06070
0024      MUL06080
0025      MUL06090
0026      MUL06100
0027      MUL06110
0028      MUL06120
0029      MUL06130
0030      MUL06140
0031      MUL06150
0032      MUL06160
0033      MUL06170
0034      MUL06180
0035      MUL06190
0036      MUL06200
0037      MUL06210
0038      MUL06220
0039      MUL06230
0040      MUL06240
0041      MUL06250

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FORTRAN IV G LEVEL 21
FILE MULTITHIT

MATCH

DATE = 80157

14/33/20

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PURDUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	SURPROGRAMS CALLED LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
AFPMIN	FA								
SYMBOL	LOCATION	SYMBOL	SCALAR MAP LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TRANK	10A	INDEX	10C	IFIRST	110	I	114	J	118
MODOTS	11C	NEXT	120	ITREE	124				
SYMBOL	LOCATION	SYMBOL	ARRAY MAP LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TACO	12A	THOLD	12C						
SYMBOL	LOCATION	SYMBOL	FORMAT STATEMENT MAP LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
9991	50A								

OPTIONS IN EFFECT IO,FCOIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = MATCH * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 41,PROGRAM SIZE = 25452
 STATISTICS NO DIAGNOSTICS GENERATED
 STATISTICS NO DIAGNOSTICS THIS STEP

FILE SCATTER

PURDUE / LARS 3031

```

C PURPOSE: MAKE A SCATTER PLOT OF GREEN NUMBER VS BRIGHTNESS
C FOR EACH ACQUISITION FOR ALL DOTS ON THE LIST
C ***** INPUT *****
C INPUT FILE OF SELECTED DOTS ON UNIT 27
C INPUT FILE ON UNIT 25 OF MULTICHANNEL RADIANCE VALUES
C ***** OUTPUT *****
C SCATTER PLOT
C REPORT ON PRINTER
C FORMAT OF INPUT FILE
C BLANK AT LABEL, LINE NUMBER, SAMPLE, CLUSTER INDEX
C LIST
C DESCRIPTION OF VARIABLES
C DATA READ FROM INPUT FILE 28--(SEGMENT NUMBER) (LIST????) WHERE
C ???? = 4 OPTIONAL CHARS AFFIXED TO LIST AS PART OF NAME,
C SUGGESTED CONVENTION IS (G,I,R), 2 INITIALS, VERSION NUMBER
C LIST(AI LABEL, LINE NUMBER, SAMPLE, ORG CLUSTER INDEX, BLANK)
C NODOTS--NUMBER OF DOTS
C BUFFER
C IDATA--LINE OF DATA (196 PIXELS X 16 CHANNELS)
C POINTERS TO CURRENT VALUES
C LINENO--CURRENT LINE NUMBER
C KOLUMN--CURRENT SAMPLE NUMBER
C
0001 COMMON /MISC/ NOACO, LNSOIL(16), IACQNT(2,6), AI(5), NMFILE(2),
0002 1 SEGM, DATE(4), IGREFN(5), IGRIDN(5), NOPGES, NOLNES, KURACO, LORU
0003 COMMON /GROUPS/ KTLARR, LARSR(30), KTLARF, LARSF(30), KTPXL(30)
0004 COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
0005 COMMON /BUFFER/ IDATA(3200), LINENO, KOLUMN
0006 COMMON /PLOT/ NPOINT, X(1000), Y(1000), LARFLD(1000)
0007 COMMON /RADIAN/ NOCHAN, IGREEN, IRRIT, IDOTRD(999,16)
0008 ***** DEFINE FILE TO BE 117 RECORDS OF 2400 WORDS EACH ***
0009 DEFINE FILE 25(117, 2400, 11, 10)
0010 CALL SETPID
0011 READ LIST OF AI LABELS, LINE NUMBERS, SAMPLES, CLUSTERS
0012 CALL RDSLST
0013 GET RADIANCE VALUES FOR PIXELS
0014 CALL RDRADN
C ***** WRITE SCATTER PLOTS *****
0011 DO 100 I = 1, NOCHAN, 2
0012 KURACO = (I + 1)/2
0013 IGREEN = I
0014 IRRIT = IGREEN + 1
C MOVE RADIANCE VALUES TO X AND Y
0015 CALL MOVEGR
C PLOT DATA
0016 NPOINT = NODOTS
0017 CALL SCATT
0018 100 CONTINUE
C STOP
0019 END
0020

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SCA00010
SCA00020
SCA00030
SCA00040
SCA00050
SCA00060
SCA00070
SCA00080
SCA00090
SCA00100
SCA00110
SCA00120
SCA00130
SCA00140
SCA00150
SCA00160
SCA00170
SCA00180
SCA00190
SCA00200
SCA00210
SCA00220
SCA00230
SCA00240
SCA00250
SCA00260
SCA00270
SCA00280
SCA00290
SCA00300
SCA00310
SCA00320
SCA00330
SCA00340
SCA00350
SCA00360
SCA00370
SCA00380
SCA00390
SCA00400
SCA00410
SCA00420
SCA00430
SCA00440
SCA00450
SCA00460
SCA00470
SCA00480
SCA00490
SCA00500
SCA00510
SCA00520
SCA00530
SCA00540
SCA00550
SCA00560
SCA00570
SCA00580
SCA00590
SCA00600
SCA00610
SCA00620
SCA00630
SCA00640
SCA00650
SCA00660
SCA00670
SCA00680
SCA00690
SCA00700
SCA00710

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FORTRAN IV G LEVEL 21
FILE SCATTER

SCATTER
PIRDUE / LARS 3071

DATE = 80157
14/44/23

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SYMBOL NOACO SEGM NOLNFS	LOCATION 0 AR AR	SYMBOL LNSOIL DATE KURACO	COMMON BLOCK / MISC LOCATION 4 4C 4C	SYMBOL IACQNT IGRIDR LOPU	MAP SIZE LOCATION 1C 7C R0	R4	SYMBOL GI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 AA
SYMBOL KTLARP	LOCATION 0	SYMBOL LARSR	COMMON BLOCK / GROUPS LOCATION 4	SYMBOL KTLARF	MAP SIZE LOCATION 7C	170	SYMBOL LABSF	LOCATION R0	SYMBOL KTPXL	LOCATION FB
SYMBOL LIST	LOCATION 0	SYMBOL NODOTS	COMMON BLOCK / LIST LOCATION 4EAC	SYMBOL NODLS	MAP SIZE LOCATION 4E10	4ERC	SYMBOL ISMRLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL TDATA	LOCATION 0	SYMBOL LINFNO	COMMON BLOCK / BUFFER LOCATION 3200	SYMBOL KOLUMN	MAP SIZE LOCATION 3204	320R	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NPOINT	LOCATION 0	SYMBOL X	COMMON BLOCK / PLOT LOCATION 4	SYMBOL Y	MAP SIZE LOCATION F44	2EE4	SYMBOL LABELO	LOCATION 1F44	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	SYMBOL IGREEN	COMMON BLOCK / RADIANT LOCATION 4	SYMBOL IRPIT	MAP SIZE LOCATION R	F9CC	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL NIOCS SCATT	LOCATION RR CC	SYMBOL SETPID IBCOMM	SUBPROGRAMS CALLED LOCATION RC 00	SYMBOL RDSLST	LOCATION C0		SYMBOL RDRADN	LOCATION C4	SYMBOL MOVEGB	LOCATION CA
SYMBOL ID	LOCATION DA	SYMBOL I	SCALAR MAP LOCATION 0R	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT IN.FRCNIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = SCATTER * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 20 PROGRAM SIZE = 532
 STATISTICS NO DIAGNOSTICS GENERATED

ORIGINAL PAGE IS
OF POOR QUALITY

FILE SCATTER

PURDUE / LARS 3031

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0001      SUBROUTINE R0SLST                                SCA00720
C                                                    SCA00730
C  PURPOSE: READ LIST (A) LABEL, LINE NO., SAMPLE, ORG INDEX TO CLUSTER SCA00740
C                                                    SCA00750
0002      COMMON /MISC/ NOACO, LNSOIL(4), IACQNT(2,6), AI(5), NMFILE(2), SCA00760
C  1 SEGM, DATE(4), IGRIND(5), IGRIND(5), NOPGS, NOLNES, KUPACO, LORU SCA00770
C                                                    SCA00780
0003      COMMON /GROUPS/ KTLARF, LARSF(30), KTLARF, LARSF(30), KTPXL(30) SCA00790
C                                                    SCA00800
0004      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30) SCA00810
C                                                    SCA00820
0005      COMMON /BUFFER/ IDATA(3200), LINENO, KOLIMN SCA00830
C                                                    SCA00840
0006      COMMON /PLOT/ NPOINT, X(1000), Y(1000), LARFLO(1000) SCA00850
C                                                    SCA00860
0007      COMMON /PADIAN/ NOCHAN, IGRFFN, IRRIT, IDOTRD(999,16) SCA00870
C                                                    SCA00880
0008      DATA IFNO, IFEND, KL, L, KU, U, IRLANK / 1, 1, SCA00890
C  READ LIST FROM ATIS SCA00900
C  SKIP FIRST RECORD SCA00910
0009      READ (29,5) NODOTS SCA00920
0010      FORMAT (I4) SCA00930
C  SET COUNT OF LABELS FOUND TO 0 SCA00940
0011      DO 6 I = 1, 30 SCA00950
0012      6   KTPXL(I) = 0 SCA00960
C  SET FIRST LABEL TO BLANK SCA00970
0013      KTLARF = 1 SCA00980
0014      LARSF(1) = IRLANK SCA00990
C  READ DOT DATA SCA01000
0015      NODOTS = 1 SCA01010
0016      10  READ (29,20,FND=1000) (LIST(NODOTS,J), J=1,5) SCA01020
0017      IF (LIST(NODOTS,1) .EQ. IFNO) GO TO 1000 SCA01030
0018      20  FORMAT (A4,4I4) SCA01040
C  IF 'LORU' IS SET TO LABELLED, SELECTED ONLY LABELLED DOTS SCA01050
0019      IF (LORU .EQ. KL .AND. LIST(NODOTS,1) .EQ. IRLANK) GO TO 10 SCA01060
C  MAKE TABLE OF DOT CATEGORIES SCA01070
C  CHECK FOR DOT ALREADY IN TABLE SCA01080
0020      DO 60 I = 1, KTLARF SCA01090
0021      IF (LIST(NODOTS,I) .NE. LARSF(I)) GO TO 60 SCA01100
0022      KTPXL(I) = KTPXL(I) + 1 SCA01110
0023      GO TO 60 SCA01120
0024      60  CONTINUE SCA01130
C  LABEL NOT IN TABLE, ENTER IT SCA01140
0025      70  KTLARF = KTLARF + 1 SCA01150
0026      IF (KTLARF .LT. 30) GO TO 80 SCA01160
0027      WRITE (4,75) KTLARF, LARSF SCA01170
0028      75  FORMAT (' FATAL ERROR, MORE THAN 30 LABELS, NO. LABELS =', I4, SCA01180
C  1 ' LABELS =', /, 30A2) SCA01190
0029      STOP SCA01200
C  ENTER LABEL IN TABLE SCA01210
0030      80  LARSF(KTLARF) = LIST(NODOTS,1) SCA01220
0031      KTPXL(KTLARF) = 1 SCA01230
C  NODOTS = NODOTS + 1 SCA01240
0032      90  NODOTS = NODOTS + 1 SCA01250
0033      GO TO 10 SCA01260
C  END OF DOTS SCA01270
0034      1000 CONTINUE SCA01280
0035      NODOTS = NODOTS - 1 SCA01290
0036      RETURN SCA01300
0037      END SCA01310

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FOOTRAN IV G LEVEL 21

RDSLST

DATE = 80157

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FILE SCATTER

PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	SYMBOL	LOCATION	MAP SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NOACQ SEG4 NOINES	LOCATION 0 AR AR	SYMBOL LNSOIL DATE KIRACO	COMMON BLOCK LOCATION 4 4C AC	SYMBOL IACONT IGPION LORU	LOCATION 1C 7C R0	SYMBOL AT IGPION	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 60 A4
SYMBOL KTLAR0	LOCATION 0	SYMBOL LARS0	COMMON BLOCK / GROUPS LOCATION 4	SYMBOL KTLARF	MAP SIZE LOCATION 7C	SYMBOL LARSF	LOCATION R0	SYMBOL KTPXL	LOCATION FR
SYMBOL LIST	LOCATION 0	SYMBOL NODOTS	COMMON BLOCK / LIST LOCATION 4E0C	SYMBOL NOCLS	MAP SIZE LOCATION 4E10	SYMBOL ISMRLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL IDATA	LOCATION 0	SYMBOL LINENO	COMMON BLOCK / BUFFER LOCATION 3200	SYMBOL KOLIMN	MAP SIZE LOCATION 3204	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NP0INT	LOCATION 0	SYMBOL Y	COMMON BLOCK / PLOT LOCATION 4	SYMBOL Y	MAP SIZE LOCATION FA4	SYMBOL LAREL0	LOCATION 1F44	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	SYMBOL IGPFFN	COMMON BLOCK / RADIAN LOCATION 4	SYMBOL IRRT	MAP SIZE LOCATION H	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL TR0MM	LOCATION FR	SYMBOL	SUBPROGRAMS CALLED LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL TFND .J	LOCATION FC 110	SYMBOL KL	SCALAR MAP LOCATION 100	SYMBOL KU	LOCATION 104	SYMBOL IRLANK	LOCATION 104	SYMBOL I	LOCATION 10C
SYMBOL S	LOCATION 114	SYMBOL 20	FORMAT STATEMENT MAP LOCATION 114	SYMBOL 75	LOCATION 120	SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT ID,FRONTIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = RDSLST * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 37, PROGRAM SIZE = 1064
 STATISTICS NO DIAGNOSTICS GENERATED

ORIGINAL PAGE 14
 OF FOUR QUALITY

FILE SCATTER

PURDUE / LARS 3031

```

0001      SUBROUTINE PDRADN
0002      C
0003      C PURPOSE: READ RADIANCE VALUES FOR SELECTED PIXELS
0004      C
0005      COMMON /MISC/ NOACO, LNSOIL(6), TACQNT(2,6), AI(5), NMFILE(2),
0006      1 SFGM, DATE(4), IGDIR(5), IGDIRN(5), NOPGES, NOLNES, NURACQ, LORU
0007      COMMON /GROUPS/ KTLARR, LARRS(30), KTLARF, LARSF(30), KTPXL(30)
0008      C
0009      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
0010      C
0011      COMMON /BUFFR/ IDATA(3200), LINENO, KOLUMN
0012      C
0013      COMMON /PLOT/ NPOINT, X(1000), Y(1000), LARFLD(1000)
0014      C
0015      COMMON /RADIAN/ NOCHAN, IGREEN, IRHIT, IDOTRD(999,16)
0016      C
0017      C SET LAST LINE TO BE 0
0018      C LSTLNE = 0
0019      C
0020      C SET LINE SIZE TO BE 196 PIXELS * NUMBER OF CHANNELS
0021      C *****
0022      C LINESZ = 196 * NOCHAN
0023      C
0024      C READ LINES OF VALUES FOR EACH PIXEL AND SAVE RADIANCE VALUES
0025      C DO 1000 I = 1, NODOTS
0026      C   LINENO = LIST(I,2)
0027      C   KOLUMN = LIST(I,3)
0028      C   IF (LINENO .EQ. LSTLNE) GO TO 100
0029      C   IF (LINENO .EQ. 0) GO TO 1000
0030      C
0031      C NEW LINE, READ LINE OF DATA
0032      C READ (25, LINENO) (IDATA(J), J=1, LINESZ)
0033      C LSTLNE = LINENO
0034      C
0035      C MOVE DATA TO IDOTRD
0036      C 100 INDEX = KOLUMN
0037      C   DO 200 L = 1, NOCHAN
0038      C     IDOTRD(I,L) = IDATA (INDEX)
0039      C 200 INDEX = INDEX + 196
0040      C
0041      C SUBTRACT SOIL LINE VALUES
0042      C   DO 300 K = 2, NOCHAN, 2
0043      C     INDEX = K/2
0044      C     IDOTRD(I,K) = IDOTRD(I,K) - LNSOIL (INDEX)
0045      C 300 CONTINUE
0046      C
0047      C 1000 CONTINUE
0048      C RETURN
0049      C END

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SCA01430
SCA01440
SCA01450
SCA01460
SCA01470
SCA01480
SCA01490
SCA01500
SCA01510
SCA01520
SCA01530
SCA01540
SCA01550
SCA01560
SCA01570
SCA01580
SCA01590
SCA01600
SCA01610
SCA01620
SCA01630
SCA01640
SCA01650
SCA01660
SCA01670
SCA01680
SCA01690
SCA01700
SCA01710
SCA01720
SCA01730
SCA01740
SCA01750
SCA01760
SCA01770
SCA01780
SCA01790
SCA01800
SCA01810
SCA01820
SCA01830
SCA01840
SCA01850
SCA01860
SCA01870
SCA01880
SCA01890
SCA01900
SCA01910

FORTRAN IV G LEVEL 21
FILE SCATTER

RDRADN

DATE = 80157

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PYHQUE / LARS 3091

SYMBOL	LOCATION	COMMON BLOCK	/MISC	/MAP	SIZE	R4	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NOACQ SECM NOINFS	LOCATION 0 6A AA	SYMBOL LNSOIL DATE KURACO	LOCATION 4 AC AC	SYMBOL IACQNT IGRIDR LGRH	LOCATION 1C 7C R0		SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 50 AA
SYMBOL KTLARR	LOCATION 0	SYMBOL LARSF	LOCATION 4	SYMBOL KTLARF	LOCATION 7C	170	SYMBOL LARSF	LOCATION R0	SYMBOL KTPXL	LOCATION FA
SYMBOL LIST	LOCATION 0	SYMBOL NDDOTS	LOCATION 4F0C	SYMBOL NOCLS	LOCATION 4E10	4F0C	SYMBOL TSMRLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL TDATA	LOCATION 0	SYMBOL LINEF0	LOCATION 3200	SYMBOL KOLIMN	LOCATION 3204	3208	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NPOINT	LOCATION 0	SYMBOL X	LOCATION 4	SYMBOL Y	LOCATION FAA	2FA4	SYMBOL LARELD	LOCATION JF44	SYMBOL	LOCATION
SYMBOL NOCHAN	LOCATION 0	SYMBOL TGRFFN	LOCATION 4	SYMBOL IRPTT	LOCATION R	F0CC	SYMBOL INDTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL TRCOMB	LOCATION DC	SYMBOL	LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL LSTLNF L	LOCATION F0 FA	SYMBOL LINESZ K	LOCATION F4 FR	SYMBOL I	LOCATION ER		SYMBOL J	LOCATION EC	SYMBOL INDEX	LOCATION F0

OPTIONS IN EFFECT ID.ERCNIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = RDRADN * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 27 PROGRAM SIZE = 768
 STATISTICS NO DIAGNOSTICS GENERATED

ORIGINAL PAGE IS
OF POOR QUALITY

FILE SCATTER

PURQUE / LARS 3031

0001		SUBROUTINE MOVEGH	SCA01920
	C		SCA01930
	C	MOVE ONE SET OF GREENNESS/BRIGHTNESS NUMBERS TO X,Y ARRAY	SCA01940
	C		SCA01950
0002		COMMON /MISC/ NOACO, LNSOIL(6), TACOOT(2,6), AI(5), VMFILE(2),	SCA01960
		1 SFGM, DATE(4), IGRIDR(5), IGRIDN(5), NOPGES, NOLNES, KURACQ, LORU	SCA01970
	C		SCA01980
0003		COMMON /GROUPS/ KTLARR, LARSP(30), KTLARF, LARSF(30), KTPXL(30)	SCA01990
	C		SCA02000
0004		COMMON/LIST/IIST(999,5), NODOTS, NOCLS, ISMRLS(30)	SCA02010
	C		SCA02020
0005		COMMON/BUFFFF/IOWATA(3200), LINEIN, KOLIMN	SCA02030
	C		SCA02040
0006		COMMON/PIOT/NPOTIT, X(1000), Y(1000), LARFLO(1000)	SCA02050
	C		SCA02060
0007		COMMON/MAOTAN/MOCHAN, IGREEN, IRGIT, IDOTRD(999,16)	SCA02070
	C		SCA02080
0008		DATA IRLANK/* */*, ISTAR/* */*	SCA02090
0009		DO 1000 I = 1, NODOTS	SCA02100
0010		X(I) = IDOTRD(I, IGREEN)	SCA02110
0011		Y(I) = IDOTRD(I, IRGIT)	SCA02120
0012		LARFLO(I) = IIST(I, 1)	SCA02130
0013		IF (LARFLO(I) .EQ. IRLANK) LARFLO(I) = ISTAR	SCA02140
0014	1000	CONTINUE	SCA02150
	C		SCA02160
0015		RETURN	SCA02170
0016		END	SCA02180

FORTRAN IV G LEVEL 21
FILE SCATTER

MOVEGR

DATE = 80157

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PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	MAP SIZE	R4	SYMBOL	LOCATION	SYMBOL	LOCATION	
NOACD	0	SYMBOL	LOCATION	SYMBOL	LOCATION	AI	4C	NMFILE	60
CFGM	AR	LNSTIL	4	IACONT	1C	IGRIDN	90	NOPGES	AA
NOINFS	AR	DATE	4C	IGRIDR	7C				
		KURACQ	AC	LOPIJ	40				
SYMBOL	LOCATION	COMMON BLOCK / GROUPS <td>MAP SIZE</td> <td>170</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td>	MAP SIZE	170	SYMBOL	LOCATION	SYMBOL	LOCATION	
KTIARD	0	LARSR	4	KTLARF	7C	LARSF	AR	KTPXL	FA
SYMBOL	LOCATION	COMMON BLOCK / LIST <td>MAP SIZE</td> <td>4FRC</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td>	MAP SIZE	4FRC	SYMBOL	LOCATION	SYMBOL	LOCATION	
LIST	0	NODOTS	4FRC	NODLS	4F10	ISMRLS	4E14		
SYMBOL	LOCATION	COMMON BLOCK / RIFFEW <td>MAP SIZE</td> <td>3204</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td>	MAP SIZE	3204	SYMBOL	LOCATION	SYMBOL	LOCATION	
INDATA	0	LINENO	3200	KOLIMN	3204				
SYMBOL	LOCATION	COMMON BLOCK / PLOT <td>MAP SIZE</td> <td>2FF4</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td>	MAP SIZE	2FF4	SYMBOL	LOCATION	SYMBOL	LOCATION	
HPPOINT	0	X	4	Y	FA4	LAHELD	1F44		
SYMBOL	LOCATION	COMMON BLOCK / RADIEN <td>MAP SIZE</td> <td>F4CC</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td>	MAP SIZE	F4CC	SYMBOL	LOCATION	SYMBOL	LOCATION	
NOCHAN	0	IGPFEN	4	IHPIT	8	INDTPD	C		
SYMBOL	LOCATION	SCALAR MAP <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td>	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IRLANK	BC	ISTAP	CO	I	C4				

OPTIONS IN EFFECT ID,FRCOTC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = MOVEGR * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 16,PROGRAM SIZE = 516
 STATISTICS NO DIAGNOSTICS GENERATED

FILE SCATTER

PURDUE / LARS 3031

```

0001      SUBROUTINE SCATT
C
C      PURPOSE  DRAW A LABELLED PLOT OF X AND Y VALUES
C              (MULTIPLE X,Y VALUES REPRESENTED BY THEIR COUNT)
C
C              GRAPH CHARACTERS ARE FIRST BLANKED.
C              5 X 5 AXES ARE RESET TO PLUSES TO FORM GRID
C              IX,IY LOCATIONS ARE SET TO THE LABEL FOR 1ST DOT AND
C              RESET TO NUMBER OF OCCURANCES FOR ADDITIONAL DOTS
C
0002      COMMON /MISC/ N0ACQ,UNSOIL(4),TACQNT(2,4),AI(1),NMFILE(2),
C      1 SEGM,DATE(4),TGPIN(4),TGRIN(4),N0PGFS,N0LN,S,K0JHACQ,L0RU
0003      COMMON /GROUPS/ KTLARH,LARSP(30),KTLARF,LARSF(30),KTPXL(30)
0004      COMMON/PLT/NPPOINT,X(1000),Y(1000),LARELD(1000)
C
0005      DIMENSION IPCT(130,65), IXAXIS(14), LINE(121)
0006      DIMENSION ISYM(37)
0007      DATA IRLANK/' ',IPLUS/'+',IRLNR/' ',IRLNR/' '
0008      DATA ISYM /'1','2','3','4','5','6','7','8','9','0',
C      1 'A','B','C','D','E','F','G','H','I','J','K','L','M',
C      2 'N','O','P','Q','R','S','T','U','V','W','X','Y','Z',' ' /
C
C      INPUT
C      X,Y-----HORIZONTAL VALUES, VERTICAL VALUES
C      LARELD---ARRAY OF CORRESPONDING LABELS TO X,Y VALUES ABOVE
C      NPPOINT--NUMBER OF POINTS TO PLOT
C      TITLE ---TITLE OF GRAPH
C
C      OUTPUT
C      GRAPH
C
C      DRAW SCATTER PLOT FOR EACH ACQUISITION
C      PUT HEADING ON GRAPH
C      CALL HEADST
0009
C
C      ***** CLEAR PLOT DATA ARRAY *****
0010      DO 1000 I = 1,121
0011      LINE(I) = IRLANK
0012      DO 1000 J = 1,61
0013      IPCT(I,J) = IRLANK
C
0014      DO 1000 I = 1,121,5
0015      DO 1000 J = 1,61,5
0016      IPCT(I,J) = IPLUS
C
C      ***** LOCATE AND STORE POINTS IN PLOT DATA ARRAY *****
0017      DO 2500 I = 1,NPPOINT
0018      IX = X(I) + 1
0019      IY = Y(I) + 4
C
C      CHECK FOR VALUES IN BOUNDS OF PLOT
0020      IF (IY .LT. 1) IY = 1
0021      IF (IY .LT. 1) IY = 1
0022      IF (IX .GT. 61) IY = 61
0023      IF (IX .GT. 121) IX = 121
C
C      STORE VALUE IN PLOT
C      IF LOCATION PREVIOUSLY UNUSED, REPLACE WITH SYMBOL
0024      K0JVAL = IPCT(IX,IY)
0025      IF (K0JVAL.NE.IRLANK.AND.K0JVAL.NE.IPLUS) GO TO 2100
0026      IPCT(IX,IY) = LARELD(I)

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SCA02900

FILE SCATTER

PURDUE / LANS 3031

```

0027      GO TO 2500
C
C IF PICT(IX,IY) IS A LABEL, RESET IT TO 2
0028      2100 IF (KURVAL .GT. 0 .AND. KURVAL .LT. 1000) GO TO 2200
0029      IPICT(IX,IY) = 2
0030      GO TO 2500
C
C IPICT(IX,IY) WAS PREVIOUSLY A MULTIPLE VALUE
0031      2200 IPICT(IX,IY) = KURVAL * I
0032      2500 CONTINUE
C
C
C ***** CONVERT VALUES TO SYMBOLS *****
C
0033      DO 2900 II = 1,61
0034      NOLINE = 62 - II
0035      LRLINE = NOLINE - 4
0036      DO 2700 KOL = 1,121
0037      LINE(KOL) = IPICT(KOL,NOLINE)
C CHECK FOR POINT TO BE BLANK OR SYMBOL
0038      IF (LINE(KOL) .GT. 1000 .OR. LINE(KOL) .LT. 0) GO TO 2700
C POINT IS A NUMBER, CONVERT IT TO A SYMBOL
0039      IPOINT = LINE(KOL)
0040      IF (IPOINT .GT. 37) IPOINT = 37
0041      LINE(KOL) = ISYM (IPOINT)
0042      2700 CONTINUE
C
C WRITE LINE
0043      IF (MOD(LRLINE,5) .EQ. 0) WRITE (6,2800) LRLINE, (LINE(J), J=1,121)
0044      IF (MOD(LRLINE,5) .NE. 0) WRITE (6,2810) (LINE(J), J= 1,121)
0045      2800 FORMAT (1H, 13, 5X, 121A1)
0046      2810 FORMAT (1H, 13, 5X, 121A1)
0047      2900 CONTINUE
C
C ***** CREATE AND WRITE X AXIS *****
C
0048      DO 2950 I = 1,14
0049      IXAXIS(I) = (I-1) * 10
C
0050      WRITE (6,3000) (IXAXIS(I), I=1,13)
0051      FORMAT (13I10)
0052      3000 FORMAT (///)
0053      RETURN
0054      END

```

SCA02900
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SCA03340

FILE SCATTER

PIRROUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	COMMON BLOCK / MISC	LOCATION	SYMBOL	/ MAP SIZE	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	
NOACQ	0	LNDOIL	4	IACQNT	1C	AI	4C	NMFLE	60			
SEGM	AR	DATE	4C	IGRIDR	7C	IGRIDN	90	NOPGES	A4			
NOINFS	AR	KIRACQ	AC	LOWJ	RO							
SYMBOL	LOCATION	SYMBOL	COMMON BLOCK / GROUPS	LOCATION	SYMBOL	/ MAP SIZE	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	
KTIARR	0	LARSR	4	KTIARF	7C	LARSF	RO	KTPXL	FM			
SYMBOL	LOCATION	SYMBOL	COMMON BLOCK / PLOT	LOCATION	SYMBOL	/ MAP SIZE	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	
NPPOINT	0	X	4	Y	FA4	LARFLD	1F44					
SYMBOL	LOCATION	SYMBOL	SUBPROGRAMS CALLED	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
HEADSI	114	IRCOM	11C									
SYMBOL	LOCATION	SYMBOL	SCALAR MAP	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IRLANK	130	IRLUS	124	IRLNX	138	I	13C	J	140			
IX	144	TY	14R	KIRVAL	14C	II	150	NOLINE	154			
IRLLNE	15R	KOL	15C	IPINT	160							
SYMBOL	LOCATION	SYMBOL	ADPAY MAP	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IPICT	164	IXAXIS	ASAC	LINE	AS44	ISYM	A7AR					
SYMBOL	LOCATION	SYMBOL	FORMAT STATEMENT MAP	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
2900	ARIC	2910	AR29	3000	8R34	3600	AR3A					

OPTIONS IN EFFECT ID,FRCDIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = SCATT * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 64, PROGRAM SIZE = 3436R
 STATISTICS NO DIAGNOSTICS GENERATED

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0001      SUPPLEMENT HEADS
C      PURPOSE:  WRITE REPORT HEADING
C
C      ***** INPUT *****
C
C      DATE(4)      DATE REPORT WRITTEN
C      IACQDT(2,6)  ACQUISITION DATES
C      SEG#4        SEGMENT NUMBER
C      LARF(1)      GROUP LABEL
C      LNSOIL(4)    SOIL LINES
C      KURACO       CURRENT ACQUISITION
C
C      ***** OUTPUT *****
C
C      REPORT HEADING WRITTEN
C
0002      COMMON /MISC/ NOACO, LNSOIL(4), IACQDT(2,6), AT(5), NMFIIF(2),
0003      1 SEG#4, DATE(4), TGRDOR(5), IGRDOR(5), NOPGES, NOLNES, KURACO, LORU
      COMMON /GROUPS/ KTLARF, LARSP(30), KTLARF, LARSP(30), KTXPL(30)
C
C
C      WRITE SEGMENT NUMBER
0004      WRITE (4,200) SEG#4, DATE, LNSOIL(KURACO)
0005      200  FORMAT (1H1, 'SITE = ', A4, ' DATE GENERATED = ', A4, ' 10X,
      1 '***CATEGORY OF INTEREST***', 10X, 'AVERAGE SOIL GREENNESS = ', I5)
C
C      WRITE ACQUISITION DATES AND LABELS
0006      WRITE(4,30) IACQDT(1,KURACO), IACQDT(2,KURACO),
      1 (LARSP(I), KTXPL(I), I = 2, KTLARF)
0007      30  FORMAT ('ACQUISITION = ', A4, 'X, 10(3X, A1, ' = ', I5),
      1 ' /, 23X, 10(3X, A1, ' = ', I5), ' /, 23X, 10(3X, A1, ' = ', I5))
C
C      INCREMENT NUMBER OF PAGES
0008      NOPGES = NOPGES + 1
C
C      RETURN
C
0010      END

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FORTRAN IV G LEVEL 21
FILE SCATTER

HEADSI

DATE = 00157

14/44/23

PAGE 0002

PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	/ MAP SIZE	R4	SYMBOL	LOCATION	SYMBOL	LOCATION		
NOACO	0	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	
SFGM	4A	INSOIL	4	IACONT	1C	AT	4C	NMFILE	00	
HOLNES	4A	DATE	4C	IGRIDN	7C	IGRIDN	90	NORGES	44	
		KIRACQ	4C	LORU	00					
SYMBOL	LOCATION	COMMON BLOCK / GROUPS <td>/ MAP SIZE</td> <td>170</td> <td>SYMBOL</td> <td>LOCATION</td> <td>SYMBOL</td> <td>LOCATION</td>	/ MAP SIZE	170	SYMBOL	LOCATION	SYMBOL	LOCATION		
KTIARD	0	SYMBOL	LOCATION	4	SYMBOL	LOCATION	7C	SYMBOL	LOCATION	
		LARSQ			KTLARF		LARSF	00	KTPXL	FR
SYMBOL	LOCATION	SUPPROGAMS CALLED	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION		
TRCOM	9C	SYMBOL	LOCATION							
SYMBOL	LOCATION	SCALAR MAP	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION		
T	40	SYMBOL	LOCATION							
SYMBOL	LOCATION	FORMAT STATEMENT MAP	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION		
200	44	SYMBOL	LOCATION	30						
			100							

OPTIONS IN EFFECT ID.FRCDIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = HEADSI * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 10 PROGRAM SIZE = 64R
 STATISTICS NO DIAGNOSTICS GENERATED
 STATISTICS NO DIAGNOSTICS THIS STEP

618

FILE PLOT4

PURDUE / LARS 3031

C PURPOSE: MAKE PLOTS OF GREEN NUMBER VS TIME AND BRIGHTNESS VS TIME
C FOR EACH ACQUISITION FOR ALL DOTS ON THE LIST

C ***** INPUT *****
C CONTROL PARAMETER FILE ENTERED BY USER
C INPUT FILE OF SELECTED DOTS ON UNIT 29
C INPUT FILE ON UNIT 25 OF MULTICHANNEL RADIANCE VALUES

C ***** OUTPUT *****
C SCATTER PLOT
C REPORT ON PRINTER
C FORMAT OF INPUT FILE

C BLANK AT LABEL, LINE NUMBER, SAMPLE, CLUSTER INDEX
C LIST

C DESCRIPTION OF VARIABLES

C DATA READ FROM INPUT FILE 29--(SEGMENT NUM R) (LIST????) WHERE
C 2222 = 4 OPTIONAL CHARS AFFIXED TO LIST AS PART OF NAME.
C SUGGESTED CONVENTION IS (G,I,R), 2 INITIALS, VERSION NUMBER

C LIST(AT LABEL, LINE NUMBER, SAMPLE, ORG CLUSTER INDEX, BLANK)
C NODOTS--NUMBER OF DOTS

C BUFFER
C IDATA--LINE OF DATA (196 PIXELS X 16 CHANNELS)

C POINTERS TO CURRENT VALUES
C LINFNO--CURRENT LINE NUMBER
C KOLUMN--CURRENT SAMPLE NUMBER

0001 COMMON /MISC/ NOACO,INSOIL(6),IACQD(2,6),AI(5),NMFILE(2),
0002 1 SEGM,DATE(4),TGTIDH(5),TGTIDN(5),NORGS

C COMMON /GROUPS/KTLARR,LARSP(30),KTLARF,LARSF(30),KTPXL(30)

0003 COMMON/LIST/LIST(999,5),NODOTS,NOCLS,ISMRLS(30)

0004 COMMON/BUFFER/IDATA(3200),LINFNO,KOLUMN

0005 COMMON/PLOT/NPOINT,X(1000),Y(1000),LABELD(1000),IPACQD(6)

0006 COMMON/RADIAN/NOCHAN,IGREEN, IGRIT, IODTRD(999,16)

0007 ***** DEFINE FILE TO BE 117 RECORDS OF 2400 WORDS EACH ***
C DEFINE FILE 25(117, 2400, 11, 10)

0008 READ CONTROL PARAMETER FILE ENTERED BY USER
C CALL SETP17

0009 READ LIST OF AT LABELS, LINE NUMBERS, SAMPLES, CLUSTERS
C CALL RDSLST

0010 GET RADIANCE VALUES FOR PIXELS
C CALL RDRADN

0011 ***** WRITE 4 PLOTS *****
C CHANGE ACQ DATES ARRAY TO ARRAY FOR X AXIS
C CALL MOVEAD

0012 PLOT DATA
0013 NPOINT = NODOTS
C CALL PLOTT4

0014 CONTINUE

0015 STOP
0016 END

PL000010
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FORTRAN IV G LEVEL 21
FILE PLOT4

PLOT4

DATE = 80157

14/42/27

PAGE 0002

PURPOSE / LAWS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	SYMBOL	LOCATION	MAP SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACO SEGM	0 68	INSOIL DATE	4 4C	IACQDI IGRIDR	1C 7C	AT IGRIDN	4C 90	NMFILE NOPGES	50 A4
KTIARP	0	LARSR	4	KTLARF	7C	LARSF	90	KTPKL	FR
LIST	0	NODOTS	4F9C	NOCLS	4F10	ISMRLS	4F14		
INDATA	0	LINFNO	3200	KOLUMN	3204				
NPPOINT	0	X	4	Y	F44	LAHFLD	1F44	IPACQD	2FF4
NICHAN	0	IGREEN	4	IRBIT	8	IDOTPD	C		
OTOCSE PLOT4	R4 CR	SETPID TRCOM	RR CC	RDSLST	RC	RDRADN	CR	NOVEAD	C4
TD	00	SCALAR MAP LOCATION		LOCATION		LOCATION		LOCATION	

OPTIONS IN EFFECT TD,FRONIC,SOURCE,NOI,IST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = PLOT4 * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 16,PROGRAM SIZE = 440
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT4

PURQUE / LARS 3031

```

0001      SURROUTINE RDSLST
0002      C PURPOSE: READ LIST (AT LABEL, LINE NO., SAMPLE, ORIG INDEX TO CLUSTER
0003      C COMMON /MISC/ NOACO, LNSOIL(6), IPACQD(2,6), AI(5), NMFILE(2),
0004      C 1 SEGM, DATE(4), IGRIDR(5), IGRIDN(5), NOPGFS
0005      C COMMON /GRUUPS/ KTLARR, LARS(30), KTLARF, LARSF(30), KTPXL(30)
0006      C COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
0007      C COMMON /HUFFEH/ IDATA(3200), LINEFN, KOLIMN
0008      C COMMON /PLOT/ NPOINT, X(1000), Y(1000), LABELD(1000), IPACQD(6)
0009      C COMMON /RADIAN/ NOCHAN, IGREEN, IRRIT, IDOTRD(999,16)
0010      C DATA TEND/ *END*/ , KL/ *L*/ , KU/ *U*/ , IBLANK / * */
0011      C      READ LIST FROM AT'S
0012      C      SKIP FIRST RECORD
0013      C      READ (29,5) NODOTS
0014      C      FORMAT (I4)
0015      C      SET COUNTS FOR LABELS FOUND TO 0
0016      C      DO 6 I = 1,30
0017      C      KTPXL(I) = 0
0018      C      SET FIRST LABEL TO BLANK
0019      C      KTLARF = 1
0020      C      LARSF(1) = IBLANK
0021      C      READ DOT DATA
0022      C      NODOTS = 1
0023      C      READ (29,20,END=1000) (LIST(NODOTS,J), J=1,5)
0024      C      IF (LIST(NODOTS,1) .EQ. TEND) GO TO 1000
0025      C      FORMAT (A4.4I4)
0026      C      IF (LORII IS SET TO LABELLED, SELECT ONLY LABELLED DOTS
0027      C      IF (LORII .EQ. KL AND LIST(NODOTS,1) .EQ. IBLANK) GO TO 10
0028      C      MAKE TABLE OF DOT CATEGORIES
0029      C      CHECK FOR DOT ALREADY IN TABLE
0030      C      DO 60 I = 1, KTLARF
0031      C      IF (LIST(NODOTS,1) .NE. LARSF(I)) GOTO 60
0032      C      KTPXL(I) = KTPXL(I) + 1
0033      C      GO TO 60
0034      C      CONTINUE
0035      C      LABEL NOT IN TABLE, ENTER IT
0036      C      KTLARF = KTLARF + 1
0037      C      IF (KTLARF .LT. 30) GO TO 60
0038      C      WRITE (6,75) KTLARF, LARSF
0039      C      FORMAT (* FATAL ERROR, MORE THAN 30 LABELS, NO. LABELS = *, I4,
0040      C      1 * LABELS = *, /, 30(A1,1X))
0041      C      STOP
0042      C      ENTER CLUSTER LABEL IN TABLE
0043      C      LARSF(KTLARF) = LIST(NODOTS,1)
0044      C      KTPXL(KTLARF) = 1
0045      C      NODOTS = NODOTS + 1
0046      C      GO TO 10
0047      C      1000 CONTINUE
0048      C      NODOTS = NODOTS - 1
0049      C      WRITE (6,1500) NODOTS
0050      C      FORMAT (///, * TOTAL NUMBER OF DOTS = *, I4)
0051      C      RETURN

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FORTRAN IV G LEVEL 21
FILE PL0T4

0039

FND

RDSLST

DATE = 40157

14/42/27

PAGE 0002

PURDUE / LARS 3031

PL001420

FILE PLOT4

PUPDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK	/MISC	/MAP	SIZE	AR	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACQ SEGM	0 6A	INSOTL DATE	4 AC	IACQDT IGRIDR	1C 7C		AT IGRIDN	4C 90	NMFILE NOPGES	50 A4		
SYMBOL KTLARP	LOCATION 0	SYMBOL LARSF	LOCATION 4	SYMBOL KTLARF	LOCATION 7C	170	SYMBOL LABSF	LOCATION 90	SYMBOL KTPXL	LOCATION F8		
SYMBOL ITST	LOCATION 0	SYMBOL NONOTS	LOCATION 4E0C	SYMBOL NOCLS	LOCATION 4E10	4E0C	SYMBOL TSMRLS	LOCATION 4F14	SYMBOL	LOCATION		
SYMBOL IDATA	LOCATION 0	SYMBOL LINFNO	LOCATION 3200	SYMBOL KOLIMN	LOCATION 3204	3200	SYMBOL	LOCATION	SYMBOL	LOCATION		
SYMBOL NPOINT	LOCATION 0	SYMBOL X	LOCATION 4	SYMBOL Y	LOCATION FA4	2EFC	SYMBOL LARELD	LOCATION 1F44	SYMBOL IPACQD	LOCATION 2EE4		
SYMBOL NOCHAN	LOCATION 0	SYMBOL IGREEN	LOCATION 4	SYMBOL IRGIT	LOCATION 8	F9CC	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION		
SYMBOL TRCOMM	LOCATION FA	SYMBOL	LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION		
SYMBOL IFND .I	LOCATION FC 110	SYMBOL KL LORII	LOCATION 100 114	SYMBOL KIJ	LOCATION 104		SYMBOL IRLANK	LOCATION 108	SYMBOL I	LOCATION 10C		
SYMBOL 5	LOCATION 118	SYMBOL 20	LOCATION 11C	SYMBOL 75	LOCATION 124		SYMBOL 1500	LOCATION 16F	SYMBOL	LOCATION		

OPTIONS IN EFFECT ID.FRCNIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = ROSLST *LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 39 PROGRAM SIZE = 1128
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT4

PURQUE / LARS 3031

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0001      SUBROUTINE RDRADM
C
C      PURPOSE: READ RADIANCE VALUES FOR SELECTED PIXELS
0002      COMMON /MISC/ NOACO, LNSOIL(6), IACQDT(2,6), AI(5), NMFILE(2),
0003      1 SEGM, DATE(4), TGM(104(5)), IGR(104(5)), NOPGES
C      COMMON /GROUPS/ KTLARR, LARSP(30), KTLARF, LARSF(30), KTPXL(30)
0004      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
C
C      COMMON /BUFFER/ IDATA(3200), LINENO, KOLUMN
0005      COMMON /PLOT/ NPOINT, X(1000), Y(1000), LABELD(1000), IPACQD(6)
C
C      COMMON /RADIAN/ NOCHAN, IGRFEN, IRRIT, IDOTRD(999,16)
0006      C
C      SET LAST LINE TO BE 0
0007      LSTLNE = 0
C
C      SET LINE SIZE TO BE 196 PIXELS * NUMBER OF CHANNELS
0008      *****
C      LINESZ = 196 * NOCHAN
C
C      READ LINES OF VALUES FOR EACH PIXEL AND SAVE RADIANCE VALUES
0009      DO 1000 I = 1, NODOTS
0010      LINENO = LIST(I,2)
0011      KOLUMN = LIST(I,3)
0012      C
C      SKIP BLANK LINE NUMBERS
0013      IF (LINENO .EQ. 0) GO TO 1000
C
C      NO NEED TO REFEAD LINE, IF PREVIOUS DOT HAD SAME LINE
0014      IF (LINENO .EQ. LSTLNE) GO TO 100
C
C      NEW LINE, READ LINE OF DATA
0015      READ (25*LINENO) (IDATA(J), J=1, LINESZ)
0016      LSTLNE = LINENO
C
C      MOVE DATA TO IDOTRD
100      INDEX = KOLUMN
0017      DO 200 L = 1, NOCHAN
0018      IDOTRD(I,L) = IDATA (INDEX)
200      INDEX = INDEX + 196
C
C      SUBTRACT SOIL LINE VALUES
0019      DO 300 K = 2, NOCHAN, 2
0020      INDEX = K/2
0021      IDOTRD(I,K) = IDOTRD(I,K) - LNSOIL(INDEX)
0022      C
0023      300 CONTINUE
C
C
0024      1000 CONTINUE
0025      RETURN
0026      END
0027

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PL001640
PL001650
PL001660
PL001670
PL001680
PL001690
PL001700
PL001710
PL001720
PL001730
PL001740
PL001750
PL001760
PL001770
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PL001790
PL001800
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PL001820
PL001830
PL001840
PL001850
PL001860
PL001870
PL001880
PL001890
PL001900
PL001910
PL001920
PL001930
PL001940
PL001950
PL001960
PL001970

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FORTRAN IV G LEVEL 21
FILE PL0T4

RRRADDN

DATE = 80157

14/42/27

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PURDUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	COMMON BLOCK / MISC	SYMBOL	MAP SIZE	AA	SYMBOL	LOCATION	SYMBOL	LOCATION
INSOIL	6A	INSOIL	LOCATION 4	IACONT	1C		AI	4C	NMFILE	40
SEG4		DATE	4C	IGRIDB	7C		IGRIDN	90	NOMGES	AA
KTLABR	0	LARS	COMMON BLOCK / GROUPS	KTLABF	7C	170	LARSF	40	KTPXL	FA
LIST	0	NOODTS	COMMON BLOCK / LIST	NOCLS	4F10	4F10	ISMRLS	4F14		LOCATION
INATA	0	LINENO	COMMON BLOCK / RIFFER	KOLIMN	3204	3204				
NDPNT	0	X	COMMON BLOCK / PLOT	Y	FA4	2FFC	LARELD	1F44	IPAC90	2EF4
NOCHAN	0	IGREEN	COMMON BLOCK / RADIANT	THRT	8	F9CC	INDTRO	C		
INCOMH	DC		SUBPROGRAMS CALLED							
LISTNE	F0	LINES7	SCALAR MAP							
I	F4	K	LOCATION F4	I	EA		J	FC	INDEX	F0

OPTIONS IN EFFECT ID.FRCOTC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = RRRADDN * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 27 PROGRAM SIZE = 768
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT4

PURDUE / LARS 3031

```

0001      SUBROUTINE MOVEAD                                PL001900
C                                                     PL001900
C  CHANGE ARRAY OF ACQUISITION DATES IN DISPLAY FORMAT (IACQDT(2,6)) PL002000
C  TO ARRAY OF ACQUISITION DATES FOR X COORDINATES (IPACQD(6)) PL002010
C                                                     PL002020
0002      COMMON /MISC/ NOACQ,LNSOIL(6),IACQDT(2,6),AI(5),NMFILE(2), PL002030
1 SFGY,DATE(4),IGRIDR(5),IGRIDN(5),NOPGES PL002040
C                                                     PL002050
0003      COMMON /GROUPS/KTLARR,LARSR(30),KTLARF,LARSF(30),KTPXL(30) PL002060
C                                                     PL002070
0004      COMMON/LIST/LIST(999,5),NODOTS,NOCLS,ISMBLS(30) PL002080
C                                                     PL002090
0005      COMMON/BUFFER/IDATA(3200),LINEFN,KOLUMN PL002100
C                                                     PL002110
0006      COMMON/PLOT/NPOINT,X(1000),Y(1000),LABELD(1000),IPACQD(6) PL002120
C                                                     PL002130
0007      COMMON/RADIAN/NOCHAN,IGREEN, IHRIT, IODTRD(999,16) PL002140
C                                                     PL002150
C                                                     PL002160
0008      DIMENSION NTEMP(4),KTEMP(4),KACQDT(2) PL002170
0009      LOGICAL*1 ITEMP1(4), LACQDT(4) PL002180
0010      EQUIVALENCE (LACQDT(1), KACQDT(1)) PL002190
0011      EQUIVALENCE (ITEMP1(1), ITEMP4) PL002200
C                                                     PL002210
0012      DO 1000 I = 1,NOACQ PL002220
C                                                     PL002230
C  SAVE ACQ DATE IN SINGLE DIMENSIONED ARRAY PL002240
0013      DO 100 J = 1,2 PL002250
0014      KACQDT(J) = IACQDT(J,I) PL002260
0015      CONTINUE PL002270
C                                                     PL002280
C  MOVE PACKED CHARS TO 1 PER WORD CHARACTERS PL002290
0016      DO 200 J = 1,4 PL002300
0017      ITEMP1(J) = LACQDT(J) PL002310
0018      KTEMP(J) = ITEMP4 PL002320
0019      CONTINUE PL002330
C                                                     PL002340
C  CALL T4A1RN(DISPLAY CODE ARRAY, NO CHARS, COMPUTATIONAL NUMB) PL002350
0020      CALL T4A1RN(KTEMP(3), 3, IDATE) PL002360
C                                                     PL002370
C  X COORDINATE = (TIME LAPSSED FROM BEGINNING OF YEAR) / 10 + 1 PL002380
0021      IPACQD(I) = (IDATE * 41.) / 365. + .5 PL002390
C                                                     PL002400
0022      CONTINUE PL002410
C                                                     PL002420
0023      RETURN PL002430
0024      END PL002440

```

FORTTRAN IV G LEVEL 21
FILE PLOT4

MOVEAD

DATE = 80157

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PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	SYMBOL	LOCATION	SIZE	AB	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACQ SEGM	0 6A	LOCATION 4 AC	IACQDT IGRIDR	1C 7C			AT IGRIDN	4C 90	NMFILE NOMGES	90 A4
KTLLAR	0	LOCATION 4	KTLLARF	7C	170		LARSF	80	KTPKL	FB
LIST	0	LOCATION 4EAC	NOCLS	4E10	4ERC		ISMBLS	4E14		
INDATA	0	LOCATION 3200	KOLUMN	3204	320R					
NPPOINT	0	LOCATION 4	Y	FA4	2FFC		LARFLD	1F44	IPACQD	2EE4
NOCHAN	0	LOCATION 4	IRAIT	R	F9CC		IDOTRD	C		
TAAIRN	00	LOCATION		LOCATION				LOCATION		LOCATION
IACQDT	00	LOCATION 00	ITEMP1	0R			ITEMP4	0R		LOCATION
I	0C	LOCATION F0	INDATE	E4				LOCATION		LOCATION
NTMP	0A	LOCATION 10R		LOCATION				LOCATION		LOCATION

OPTIONS IN EFFECT ID,ERCDIC, SOURCE, NOLIST, DECK, NOLOAD, MAP
 OPTIONS IN EFFECT NAME = MOVEAD * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 24, PROGRAM SIZE = 718
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT4

PURDUE / LARS 3031

```

C
C PUT HEADING ON GRAPH
0029 C0 CALL HEADP4
C
C WRITE SURHEADING
C
0030 WRITE (6,95) NOGRID
0031 95 FORMAT (//,40X, ' GREEN NO. VS TIME', ///
1 40X, ' GRID', I2)
C
0032 WRITE (6,100)
0033 100 FORMAT (//,2(6X, 'DOT' 11NF PIXEL LABEL', I2X))
C
C CALCULATE THE DOT NUMBER
C
0034 DO 96 I=1,4
0035 NODOT(I) = IRLANK
0036 IF (MOD(JLIST(I,2),10).NE.0 .OR. MOD(JLIST(I,3),10).NE.0) GO TO 96
0037 NO = (JLIST(I,2)/10-1)*2+JLIST(I,3)/10
0038 CALL AFWMIN(NO,3,NODOT(I))
0039 96 CONTINUE
C
0040 WRITE (6,200) (NODOT(I),JLIST(I,2),JLIST(I,3),JLIST(I,1),
0041 1 I = 1, LAST, 2)
0041 IF (LAST .LT. 2) GO TO 300
C
0042 WRITE (6,200) (NODOT(I),JLIST(I,2),JLIST(I,3),JLIST(I,1),
0043 1 I = 2, LAST, 2)
0043 200 FORMAT (1X,2(5X,A3,I7,I6,5X,A1,16X))
C
0044 ***** CLEAR PLOT DATA ARRAY *****
0045 DO 1800 I = 1,37
0046 DO 1800 J = 1,40
0047 DO 1800 K = 1,2
1800 IPIC(I,J,K) = IRLANK
C
C
C ***** LOCATE AND STORE POINTS IN PLOT DATA ARRAY *****
0048 DO 2500 I = 1, LAST
0049 DO 2500 NDEXRD = 2, NOCHAN, 2
C
C CALC Y = RADIANCE VALUE - SOIL LINE + FACTOR TO MAKE IT POSITIVE / 4
C **** SOIL LINE SUBTRACTED IN SUBROUTINE RDRADN
0050 NDY = NDEXRD/2
0051 IY = (JNDOTRD(I,NDEXRD) + R) / 4. + .5
0052 IX = IPACON(NDY)
0053 NDEXPL = (IY + 1) / 2
C
C CHECK FOR VALUES IN BOUNDS OF PLOT
0054 IF (IX .LT. 1) IX = 1
0055 IF (IY .LT. 1) IY = 1
0056 IF (IY .GT. 20) IY = 20
0057 IF (IX .GT. 37) IX = 37
C
C STORE VALUE IN PLOT
C IF LOCATION PREVIOUSLY UNUSED, REPLACE WITH SYMBOL
0058 KURVAL = IPIC(IX,IY,NDEXPL)
0059 IF (KURVAL .NE. IRLANK) IPIC(IX,IY,NDEXPL) = 1STAR
0060 IF (KURVAL .EQ. IRLANK) IPIC(IX,IY,NDEXPL) = LABELS(I)
0061 2500 CONTINUE
C
C WRITE LINE
C ***** WRITE LINES OF PLOT *****
0062 DO 2900 I = 1,20
0063 LINE = 21 - I
0064 LRLNE = LINE * 4 - R
0065 IF (MOD(LRLNE,8) .EQ. 0) WRITE (6,2800) LRLNE,
0066 1 (IPIC(J,LINE,1), J=1,37), LRLNE, (IPIC(J,LINE,2), J=1,37)
IF (MOD(LRLNE,8) .NE. 0) WRITE (6,2810) IPERON,

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PL003140
 PL003170
 PL003140
 PL003190
 PL003200
 PL003210
 PL003220
 PL003230
 PL003240
 PL003250
 PL003260
 PL003270
 PL003280
 PL003290
 PL003300
 PL003310
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 PL003830
 PL003840
 PL003850
 PL003860

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FILE PLOT4

PURDUE / LARS 3031

```

0067      1 (IPICT(J,LINE,1),J=1,37), IPEROD, (IPICT(J,LINE,2),J=1,37) PL003870
0068      2800 FORMAT (1H,13,37A1,5X,13,37A1) PL003880
0069      2810 FORMAT (1H,2X,A1,37A1,5X,2X,A1,37A1) PL003890
0069      2900 CONTINUE PL003900
C PL003910
C ***** WRITE Y AXIS ***** PL003920
C PL003930
0070      WRITE (6,2950) PL003940
0071      2950 FORMAT (4X,2('J..F..M...A..M...J...J..A...S...O..N...D...'),6X),////) PL003950
C PL003960
C ***** WRITE BRIGHTNESS AGAINST TIME ***** PL003970
C PL003980
C WRITE SURHEADING PL003990
0072      3000 WRITE (6,3010) PL004000
0073      3010 FORMAT (40X,'BRIGHTNESS VS TIME',/) PL004010
C PL004020
C ***** CLEAR PLOT DATA ARRAY ***** PL004030
0074      3050 DO 3100 I = 1,37 PL004040
0075      DO 3100 J = 1,40 PL004050
0076      DO 3100 K = 1,2 PL004060
0077      3100 IPICT(I,J,K) = IPLANK PL004070
C PL004080
C ***** LOCATE AND STORE POINTS IN PLOT DATA ARRAY ***** PL004090
0078      DO 3500 I = 1,IAST PL004100
0079      DO 3500 NDFXP0 = 1,NDOCHAN,2 PL004110
C PL004120
C CALC Y = RADIANCE VALUE - SOIL LINE * FACTOR TO MAKE IT POSITIVE / 4 PL004130
0080      NDX = NDFXP0/2 + 1 PL004140
0081      IY = JNDITH0(I,NDFXP0) / 4. + .5 PL004150
0082      IX = IPAC00(NDX) PL004160
0083      NDFXP1 = (I + 1) / 2 PL004170
C PL004180
C CHECK FOR VALUES IN BOUNDS OF PLOT PL004190
0084      IF (IX .LT. 1) IX = 1 PL004200
0085      IF (IY .LT. 1) IY = 1 PL004210
0086      IF (IY .GT. 40) IY = 40 PL004220
0087      IF (IX .GT. 37) IX = 37 PL004230
C PL004240
C STORE VALUE IN PLOT PL004250
C IF LOCATION PREVIOUSLY UNUSED, REPLACE WITH SYMBOL PL004260
0088      KURVAL = IPICT(IX,IY,NDFXP1) PL004270
0089      IF (KURVAL .NE. IPLANK) IPICT(IX,IY,NDFXP1) = ISTAR PL004280
0090      IF (KURVAL .EQ. IPLANK) IPICT(IX,IY,NDFXP1) = LARELS(I) PL004290
0091      3500 CONTINUE PL004300
C PL004310
C ***** WRITE LINES OF PLOT ***** PL004320
0092      DO 3900 I = 1,40 PL004330
0093      LINE = 41 - I PL004340
0094      LRLNE = LINE * 4 PL004350
0095      IF (MOD(LRLNE,8) .EQ. 0) WRITE (6,2800) LRLNE PL004360
0096      1 (IPICT(J,LINE,1),J=1,37), LRLNE, (IPICT(J,LINE,2),J=1,37) PL004370
0096      IF (MOD(LRLNE,8) .NE. 0) WRITE (6,2810) IPEROD PL004380
0097      1 (IPICT(J,LINE,1),J=1,37), IPEROD, (IPICT(J,LINE,2),J=1,37) PL004390
0097      3900 CONTINUE PL004400
C PL004410
C ***** WRITE Y AXIS ***** PL004420
C PL004430
0098      WRITE (6,2950) PL004440
0099      4000 CONTINUE PL004450
C PL004460
0100      5000 IF (MSTNDX .LE. NDOOTS) GO TO 10 PL004470
0101      RETURN PL004480
0102      END PL004490

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FORTRAN IV G LEVEL 21
FILE PLOT4

PLOTT4

DATE = 40157

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PHRDUE / LARS 3031

SYMBOL LIST	LOCATION 0	COMMON BLOCK /LIST SYMBOL NODOTS	LOCATION 4F0C	/ MAP SIZE SYMBOL NODLS	LOCATION 4E10	4ERC SYMBOL ISMRLS	LOCATION 4F14	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL NOACQ SEGM	LOCATION 0 6A	COMMON BLOCK /MISC SYMBOL LNSOIL DATE	LOCATION 4 6C	/ MAP SIZE SYMBOL TACQNT TGRIDR	LOCATION 1C 7C	AR SYMBOL AT TGRIDN	LOCATION 4C 8D	SYMBOL NMFILE NORGS	LOCATION 6D 8A
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK /RADIAN SYMBOL TGREEN	LOCATION 4	/ MAP SIZE SYMBOL THRT	LOCATION R	F9CC SYMBOL IDOTRD	LOCATION C	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL KTLARR	LOCATION 0	COMMON BLOCK /GROUPS SYMBOL LARSR	LOCATION 4	/ MAP SIZE SYMBOL KTLARF	LOCATION 7C	170 SYMBOL LARSF	LOCATION 8D	SYMBOL KTPXL	LOCATION F8
SYMBOL NDPINT	LOCATION 0	COMMON BLOCK /PLOT SYMBOL X	LOCATION 4	/ MAP SIZE SYMBOL Y	LOCATION FA4	2EFC SYMBOL LARELD	LOCATION 1F44	SYMBOL IPACOD	LOCATION 2EE4
SYMBOL HFAOP4	LOCATION 1AC	SUBPROGRAMS CALLED SYMBOL TRCOM#	LOCATION 190	SYMBOL AFRMTN	LOCATION 1R4	SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL IPFRON I J IX	LOCATION 1F4 20R 21C 230	SCALAR MAP SYMBOL IRLANK LAST K NDXPL	LOCATION 1FR 20C 220 23A	SYMBOL ISTAP NOGRID NDXPD KIRVAL	LOCATION 1FC 210 224 238	SYMBOL IRLNK JJ NDX LINE	LOCATION 200 214 22R 23C	SYMBOL MSTNDX NO IX L9LLNE	LOCATION 204 21R 22C 240
SYMBOL IPICT NODOT	LOCATION 244 323C	ARRAY MAP SYMBOL IXAXIS	LOCATION 30P4	SYMBOL LARFLS	LOCATION 30BC	SYMBOL JLIST	LOCATION 30FC	SYMBOL JDOTRD	LOCATION 313C
SYMBOL 95 2950	LOCATION 324C 3207	FORMAT STATEMENT MAP SYMBOL 100 3010	LOCATION 3272 330F	SYMBOL 200	LOCATION 329R	SYMBOL 2800	LOCATION 32AD	SYMBOL 2810	LOCATION 32C0

OPTIONS IN EFFECT ID,ERCOIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = PLOTT4 * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 102,PROGRAM SIZE = 16466
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT4

PURDUE / LARS 3031

```

0001      SUBROUTINE HEADP4
C
C      PURPOSE: WRITE REPORT HEADING
C
C      ***** INPUT *****
C
C      DATE(4)      DATE REPORT WRITTEN
C      IACQNT(4)    ACQUISITION DATES
C      SEGM        SEGMENT DATE
C      LARSF        CLUSTER LABELS IN PLOTS
C      LNSOIL(4)    SOIL LINES
C
C      ***** OUTPUT *****
C
C      REPORT HEADING WRITTEN
C
0002      COMMON /MISC/ NOACQ, LNSOIL(6), IACQNT(2,6), AT(5), NMFILE(2),
1 SEGM, DATE(4), IGR1DR(5), IGR1DN(5), NOPGFS, NOLNES, KURACQ
0003      COMMON /GROUPS/ KTLAHR, LARSR(30), KTLARF, LARSF(30), KTPXL(30)
C
C      WRITE SEGMENT NUMBER
0004      WRITE (6,200) SEGM, DATE, (LARSF(I), I=2, KTLARF)
0005      200  FORMAT (1H, 'SITE = ', A4, ' DATE GENERATED = ', A4, ' 10X,
1 ' CATEGORIES PLOTTED ', 15(A1, ' '), /, 40X, 15(A1, ' '))
C
C      WRITE ACQUISITION DATES
0006      WRITE (6,300) IACQNT
0007      300  FORMAT ('ACQUISITION' = ', 6(2A4, 2X))
C
C      WRITE SOIL LINES
0008      WRITE (6,400) (LNSOIL(I), I=1, NOACQ)
0009      400  FORMAT (' SOIL LINES = ', 6(15, 5X))
C
C      RETURN
0010
C      END
0011

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PL004550
PL004560
PL004570
PL004580
PL004590
PL004600
PL004610
PL004620
PL004630
PL004640
PL004650
PL004660
PL004670
PL004680
PL004690
PL004700
PL004710
PL004720
PL004730
PL004740
PL004750
PL004760
PL004770
PL004780
PL004790
PL004800
PL004810
PL004820
PL004830
PL004840
PL004850
PL004860
PL004870
PL004880
PL004890
PL004900
PL004910
PL004920
PL004930
PL004940

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FILE PLOT4

PIRQUE / LARS 3031

COMMON BLOCK / MISC		/ MAP SIZE		40			
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACO	0	LNSOIL	4	IACONT	1C	AT	4C
SEGN	6A	DATE	6C	IGRIDR	7C	IGRIDN	90
NOLNFS	8A	KURACO	AC			NMFILE	70
						NORGES	44
COMMON BLOCK / GROUPS		/ MAP SIZE		170			
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
KTLARR	0	LARSF	4	KTLARF	7C	LARSF	40
						KTPXL	FA
SUBPROGRAMS CALLED							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TRCOM#	AD						
SCALAR MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
I	84						
FORMAT STATEMENT MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
200	8A	300	101	400	110		

OPTIONS IN EFFECT ID,EPDTC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = HEADP4 * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 11 PROGRAM SIZE = 616
 STATISTICS NO DIAGNOSTICS GENERATED
 STATISTICS NO DIAGNOSTICS THIS STEP

FILE PLOTIR

PURDUE / LAWS 3031

```

C PURPOSE: MAKE A SCATTER PLOT OF GREEN NUMBER VS BRIGHTNESS
C           FOR EACH ACQUISITION FOR ALL DOTS ON THE LIST (18/PAGE)
C
C ***** INPUT *****
C INPUT FILE OF SELECTED DOTS ON UNIT 29
C INPUT FILE ON UNIT 25 OF MULTICHANNEL RADIANCE VALUES
C
C ***** OUTPUT *****
C SCATTER PLOTS (14/PAGE)
C
C FORMAT OF INPUT FILE (SEGMENT NUMBER) LIST???? A
C
C BLANK AT LABEL, LINE NUMBER, SAMPLE, CLUSTER INDEX
C
C DESCRIPTION OF VARIABLES
C
C DATA READ FROM INPUT FILE 29--(SEGMENT NUMBER) (LIST????) WHERE
C 2??? = 4 OPTIONAL CHARS AFFIXED TO LIST AS PART OF NAME,
C SUGGESTED CONVENTION IS (G,I,P), 2 INITIALS, VERSION NUMBER
C LIST AT LABEL, LINE NUMBER, SAMPLE, ORG CLUSTER INDEX, BLANK)
C NODOTS--NUMBER OF DOTS
C
C BUFFFF
C TDATA--LINE OF DATA (196 PIXELS X 16 CHANNELS)
C
C POINTERS TO CURRENT VALUES
C LINENO--CURRENT LINE NUMBER
C KOLUMN--CURRENT SAMPLE NUMBER
C
0001 COMMON /MISC/ NOACQ, LNSOIL(6), IACQNT(2,6), AI(5), NMFILE(2),
0002 1 SECY, DATE(4), IGRION(5), IGRION(5), NOPGS
C COMMON /GROUPS/ KTLARP, LARSP(30), KTLARF, LARSF(30), KTPXL(30)
0003
C COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMBLS(30)
0004
C COMMON /BUFFFF/ TDATA(3200), LINENO, KOLUMN
0005
C COMMON /PLOT/ NPOINT, X(1000), Y(1000), LABFLD(1000), IPACQD(6)
0006
C COMMON /RADIAN/ NOCHAN, IGREEN, IRWIT, INOTRD(999,16)
C
C ***** DEFINE FILE TO BE 117 RECORDS OF 2400 WORDS EACH ***
0007 DEFINE FILE 25(117, 2400, 11, 10)
C
C READ CONTROL PARAMETER FILE
C CALL SETPID
0008
C READ LIST OF AT LABELS, LINE NUMBERS, SAMPLES, CLUSTERS
C CALL RDSLIST
0009
C
C GET RADIANCE VALUES FOR PIXELS
C CALL RDRADN
0010
C
C ***** CREATE 1P PLOTS *****
C CHANGE ACQ DATES ARWAY TO ARRAY FOR X AXIS
C CALL MOVFAD
0011
C
C PLOT DATA
C NPOINT = NODOTS
C CALL PLTIR
0012
0013
C 100 CONTINUE
0014
C
C STOP
0015
C END
0016

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PL000010
 PL000020
 PL000030
 PL000040
 PL000050
 PL000060
 PL000070
 PL000080
 PL000090
 PL000100
 PL000110
 PL000120
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 PL000200
 PL000210
 PL000220
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 PL000240
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 PL000260
 PL000270
 PL000280
 PL000290
 PL000300
 PL000310
 PL000320
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 PL000370
 PL000380
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 PL000600
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 PL000660
 PL000670

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FORTRAN IV G LEVEL 21
FILE PLOT1R

PLOT1R

DATE = 80157

14/43/10

PAGE 0002

PURQUE / LARS 3031

SYMBOL HIDACQ SEGM	LOCATION 0 6R	COMMON BLOCK /MISC LOCATION 4 4C	SYMBOL IACDOT IGRIDR	MAP SIZE LOCATION 1C 7C	4R	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NORGES	LOCATION 50 44
SYMBOL KTLARR	LOCATION 0	COMMON BLOCK /GROUPS LOCATION 4	SYMBOL KTLARF	MAP SIZE LOCATION 7C	170	SYMBOL LARSF	LOCATION 80	SYMBOL KTPXL	LOCATION FM
SYMBOL LIST	LOCATION 0	COMMON BLOCK /LIST LOCATION 4FAC	SYMBOL NOCLS	MAP SIZE LOCATION 4E10	4FRC	SYMBOL ISMRLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL IDATA	LOCATION 0	COMMON BLOCK /BUFFER LOCATION 3200	SYMBOL KOLUMN	MAP SIZE LOCATION 3204	320R	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL HPOINT	LOCATION 0	COMMON BLOCK /PLOT LOCATION 4	SYMBOL Y	MAP SIZE LOCATION FA4	2FRC	SYMBOL LARELO	LOCATION 1F44	SYMBOL IPACQD	LOCATION 2E4
SYMBOL HOCAN	LOCATION 0	COMMON BLOCK /RADIAN LOCATION 4	SYMBOL IRPIT	MAP SIZE LOCATION A	F0CC	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL OTOCSE PLTIR	LOCATION R4 CR	SUBPROGRAMS CALLED LOCATION RR CC	SYMBOL RDCLEST	LOCATION RC		SYMBOL RDRADN	LOCATION C0	SYMBOL MOVEAD	LOCATION C4
SYMBOL ID	LOCATION 00	SCALAR MAP LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT IN.FRCOTIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = PLOT1R * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 14, PROGRAM SIZE = 440
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT1A

PURDUE / LARS 3031

```

0001      C      SUBROUTINE WDLST
0002      C      PURPOSE: READ LIST (AT LABEL, LINE NO., SAMPLE, ORG INDEX TO CLUSTER
0003      C      COMMON /MISC/ NOACO, LNSOIL(4), IACQOT(2,4), AI(5), NMFILE(2),
0004      C      1 SEGM, DATE(4), IGMJNR(5), IGRIGN(5), NOPGFS
0005      C      COMMON /GROUPS/ KTLARF, LARSP(30), KTLARF, LARSF(30), KTPXL(30)
0006      C      COMMON /LIST/ LIST(100,5), NODOTS, NOCLS, ISMPLS(30)
0007      C      COMMON /BUFFER/ IDATA(1200), I INEVO, KOLIMN
0008      C      COMMON /PLOT/ NPOINT, X(1000), Y(1000), LABELD(1000), IPACQD(6)
0009      C      COMMON /RADIAN/ NOCHAN, IGREEN, IHRIT, IDOTRD(999,16)
0010      C      DATA IEND/'END', KL/'L', KU/'U', IBLANK/' '
0011      C      READ LIST FROM ATIS
0012      C      SKIP FIRST RECORD
0013      C      READ (29,5) NODOTS
0014      C      FORMAT (I4)
0015      C      SET KNIGHTS OF LABELS FOUND TO 0
0016      C      DO 4 I = 1,30
0017      C      KTPXL(I) = 0
0018      C      SET FIRST LABEL TO BLANK
0019      C      KTLARF = 1
0020      C      LARSF(1) = IBLANK
0021      C      READ DOT DATA
0022      C      NODOTS = 1
0023      C      DO 10 J = 1,5
0024      C      READ (29,20,FMT=1000) (LIST(NODOTS,J), J=1,5)
0025      C      IF (LIST(NODOTS,1) .EQ. IEND) GO TO 1000
0026      C      FORMAT (A4,4I4)
0027      C      IF (LORU IS SET TO LABELLED, SELECT ONLY LABELLED DOTS
0028      C      IF (LORU .EQ. KL .AND. LIST(NODOTS,1) .EQ. IBLANK) GO TO 10
0029      C      MAKE TABLE OF DOT CATEGORIES
0030      C      CHECK FOR DOT ALREADY IN TABLE
0031      C      DO 40 I = 1, KTLARF
0032      C      IF (LIST(NODOTS,1) .NE. LARSF(I)) GO TO 60
0033      C      KTPXL(I) = KTPXL(I) + 1
0034      C      GO TO 40
0035      C      CONTINUE
0036      C      LABEL NOT IN TABLE, ENTER IT
0037      C      KTLARF = KTLARF + 1
0038      C      IF (KTLARF .GT. 30) GO TO 80
0039      C      WRITE (6,75) KTLARF, LARSF
0040      C      FORMAT (' FATAL ERROR, MORE THAN 30 LABELS, NO. LABELS = ', I4,
0041      C      1 ' LABELS = ', /, 30(A), 'X'))
0042      C      STOP
0043      C      LABSF(KTLARF) = LIST(NODOTS, 1)
0044      C      KTPXL(KTLARF) = 1
0045      C      NODOTS = NODOTS + 1
0046      C      GO TO 10
0047      C      CONTINUE
0048      C      NODOTS = NODOTS - 1
0049      C      WRITE (6,1500) NODOTS
0050      C      FORMAT (///, ' TOTAL NUMBER OF DOTS = ', I4, //)

```

FORTRAN IV G LEVEL 21
FILE PLOT1A

0038
0039

RETURN
END

POSTEST

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PL001300
PL001400

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FILE PLOTJR

RDSLST

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PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	SYMBOL	LOCATION	MAP SIZE	AR	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACQ SFCM	0 6R	LMSOIL DATE	4 4C	TACQDT IGPIDR	1C 7C		AI IGRIDN	4C 90	NMFIL VOPGES	60 A4
SYMBOL KTI ARR	LOCATION 0	COMMON BLOCK / GROUPS	SYMBOL LARS	LOCATION 4	MAP SIZE LOCATION 7C	170	SYMBOL LARS	LOCATION 90	SYMBOL KTPXL	LOCATION FR
SYMBOL LIST	LOCATION 0	COMMON BLOCK / LIST	SYMBOL NODOTS	LOCATION 4E0C	MAP SIZE LOCATION 4E10	4E0C	SYMBOL ISMRLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL TDATA	LOCATION 0	COMMON BLOCK / BUFFER	SYMBOL LINE0	LOCATION 3200	MAP SIZE LOCATION 3204	320R	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NPOINT	LOCATION 0	COMMON BLOCK / PLOT	SYMBOL X	LOCATION 4	MAP SIZE LOCATION FA4	2EFC	SYMBOL LARELD	LOCATION 1F44	SYMBOL TPACQD	LOCATION 2FE4
SYMBOL NOCHAN	LOCATION 0	COMMON BLOCK / RADIANT	SYMBOL IGREEN	LOCATION 4	MAP SIZE LOCATION A	FWCC	SYMBOL IDOTPD	LOCATION C	SYMBOL	LOCATION
SYMBOL TRCOMW	LOCATION FR	SUBPROGRAMS CALLED	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL TFND J	LOCATION FC 110	SCALAR MAP LOCATION 100 LOW	SYMBOL KL	LOCATION 114	SYMBOL KII	LOCATION 104	SYMBOL IHLANK	LOCATION 10R	SYMBOL I	LOCATION 10C
SYMBOL S	LOCATION 11R	FORMAT STATEMENT MAP LOCATION 20 11C	SYMBOL	LOCATION 75	SYMBOL	LOCATION 124	SYMBOL 1500	LOCATION 1SF	SYMBOL	LOCATION

OPTIONS IN EFFECT ID,FRCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = RDSLST * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 39,PROGRAM SIZE = 1136
 STATISTICS NO DIAGNOSTICS GENERATED

ORIGINAL PAGE IS
OF POOR QUALITY

FILE PL0T1A

Purdue / LARS 3031

```

0001      SUBROUTINE RDRADN
0002      C
0003      C PURPOSE: READ RADIANCE VALUES FOR SELECTED PIXELS
0004      C
0005      COMMON /MISC/ NOACO, LNSOIL(6), IACQNT(2,6), AI(5), NMFILE(2),
0006      1 SFGM, DATE(4), IGRIND(5), IGRION(5), NOPGS
0007      COMMON /GRIDS/ KTLARR, LARSP(30), KTLARF, LARSF(30), KTXL(30)
0008      C
0009      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMALS(30)
0010      C
0011      COMMON /PIEPP/ IDATA(3200), ILINEO, KOLUMN
0012      C
0013      COMMON /PLOT/ NPOINT, X(1000), Y(1000), LARELD(1000), IPACOD(6)
0014      C
0015      COMMON /RADIAN/ NOCHAN, IGREEN, IRRIT, IDOTRD(999,16)
0016      C
0017      C SET LAST LINE TO BE 0
0018      LSTLNE = 0
0019      C
0020      C SET LINE SIZE TO BE 196 PIXELS * NUMBER OF CHANNELS
0021      C *****
0022      LINESZ = 196 * NOCHAN
0023      C
0024      C READ LINES OF VALUES FOR EACH PIXEL AND SAVE RADIANCE VALUES
0025      DO 1000 I = 1, NODOTS
0026      LLINEO = LIST(I,2)
0027      KOLUMN = LIST(I,3)
0028      C
0029      C SKIP BLANK LINE NUMBRS
0030      IF (LLINEO .EQ. 0) GO TO 1000
0031      C
0032      C NO NEED TO REPEAT LINE, IF PREVIOUS DOT HAD SAME LINE
0033      IF (LLINEO .EQ. LSTLNE) GO TO 100
0034      C
0035      C NEW LINE, READ LINE OF DATA
0036      READ (25,LLINEO) (IDATA(J), J=1,LINESZ)
0037      LSTLNE = LLINEO
0038      C
0039      C MOVE DATA TO IDOTRD
0040      DO 200 INDEX = KOLUMN
0041      DO 200 L = 1, NOCHAN
0042      IDOTRD(I,L) = IDATA(INDEX)
0043      INDEX = INDEX + 196
0044      C
0045      C SUBTRACT SOIL LINE VALUES
0046      DO 300 K = 2, NOCHAN, 2
0047      INDEX = K/2
0048      IDOTRD(I,K) = IDOTRD(I,K) - LNSOIL(INDEX)
0049      C
0050      300 CONTINUE
0051      C
0052      1000 CONTINUE
0053      RETURN
0054      END

```

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QDRADN

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FILE PLOT1A

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SYMBOL NOACQ SEGM	LOCATION 0 6R	SYMBOL LNSOIL DATE	COMMON BLOCK / MISC LOCATION 4 AC	SYMBOL IACQNT IGRIDN	MAP SIZE LOCATION 1C 7C	AR	SYMBOL AI IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NDPGES	LOCATION 60 A4
SYMBOL KTLARD	LOCATION 0	SYMBOL LARSQ	COMMON BLOCK / GROUPS LOCATION 4	SYMBOL KTLARF	MAP SIZE LOCATION 7C	170	SYMBOL LARSF	LOCATION 80	SYMBOL KTPXL	LOCATION FH
SYMBOL LIST	LOCATION 0	SYMBOL NDDOTS	COMMON BLOCK / LIST LOCATION 4F0C	SYMBOL NOCLS	MAP SIZE LOCATION 4F10	4ERC	SYMBOL ISMHLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL IDATA	LOCATION 0	SYMBOL LINFNO	COMMON BLOCK / BUFFER LOCATION 4200	SYMBOL KOLUMN	MAP SIZE LOCATION 3204	420R	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL NPOINT	LOCATION 0	SYMBOL X	COMMON BLOCK / PLOT LOCATION 4	SYMBOL Y	MAP SIZE LOCATION F44	2FEC	SYMBOL LARELD	LOCATION 1F44	SYMBOL IPACQD	LOCATION JEE4
SYMBOL NOCHAN	LOCATION 0	SYMBOL IGREEN	COMMON BLOCK / RADIAN LOCATION 4	SYMBOL THRIT	MAP SIZE LOCATION A	190C	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL TROCM#	LOCATION DC	SYMBOL	SUBPROGRAMS CALLED LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL LSTLNF L	LOCATION F0 F4	SYMBOL LINES7 K	SCALAR MAP LOCATION F4 F0	SYMBOL I	LOCATION ER		SYMBOL J	LOCATION EC	SYMBOL INDEX	LOCATION F0

OPTIONS IN EFFECT ID,FRCDIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = QDRADN * LINFENT = 75
 STATISTICS SOURCE STATEMENTS = 27 * PROGRAM SIZE = 768
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT1A

PURDUE / LARS 3031

```

0001      SUBROUTINE MOVFAD                                PL001950
C      CHANGE ARRAY OF ACQUISITION DATES IN DISPLAY FORMAT (IACQDT(2,6)) PL001960
C      TO ARRAY OF ACQUISITION DATES FOR X COORDINATES (IPACQD(6))      PL001970
C      PL001980
0002      COMMON /MISC/ NOACO, LNSOIL(6), IACQDT(2,6), AI(5), NMFILE(2), PL001990
C      1 SEGM, DATE(4), IGRINDR(5), IGRINDN(5), NOPRES PL002000
C      PL002010
0003      COMMON /GROUPS/KT1 ARR, LARSP(30), KTLARF, LARSP(30), KTPXL(30) PL002020
C      PL002030
0004      COMMON /LIST/LIST(999,5), NODOTS, NOCLS, ISMRLS(30) PL002040
C      PL002050
0005      COMMON /BUFFER/IDATA(3200), LINENO, KOLIMN PL002060
C      PL002070
0006      COMMON /PLOT/NPOINT, X(1000), Y(1000), LABELQ(1000), IPACQD(6) PL002080
C      PL002090
0007      COMMON /WANTAN/NOCHAN, IGRFEN, IPRIT, IDOTWD(999,16) PL002100
C      PL002110
C      PL002120
0008      DIMENSION NTEMP(5), KTEMP(8), KACQDT(2) PL002130
0009      LOGICAL*1 ITEMP1(4), LACQDT(8) PL002140
0010      EQUIVALENCE (LACQDT(1), KACQDT(1)) PL002150
0011      EQUIVALENCE (ITEMP1(1), ITEMP4) PL002160
C      PL002170
0012      DO 1000 I = 1, NOACO PL002180
C      PL002190
C      SAVE ACQ DATE IN SINGLE DIMENSIONED ARRAY PL002200
C      DO 100 J = 1, 2 PL002210
0013      KACQDT(J) = IACQDT(I,1) PL002220
0014      CONTINUE PL002230
0015      C      PL002240
C      MOVE PACKED CHARS TO 1 PER WORD CHARACTERS PL002250
C      DO 200 I = 1, 8 PL002260
0016      ITEMP1(1) = LACQDT(I) PL002270
0017      KTEMP(I) = ITEMP4 PL002280
0018      CONTINUE PL002290
0019      200 CONTINUE PL002300
C      PL002310
C      CALL I4AIRN(DISPLAY CODE ARRAY, NO CHARS, COMPUTATIONAL NUMB) PL002320
C      CALL I4AIRN(KTEMP(3), 3, IDATE) PL002330
C      PL002340
C      X COORDINATE = (TIME LAPPED FROM BEGINNING OF YEAR) / 10 + 1 PL002350
C      IPACQD(1) = (IDATE * 41.) / 365. + 1 PL002360
C      PL002370
C      1000 CONTINUE PL002380
C      PL002390
0020      RETURN PL002400
0021      END PL002410

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FILE PLOT1A

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SYMBOL	LOCATION	COMMON BLOCK / MISC	SYMBOL	LOCATION	SIZE	4H	SYMBOL	LOCATION	SYMBOL	LOCATION
NDACQ	0	INSOIL	4	IACQNT	1C		AT	4C	NMFILE	43
SECM	6A	DATE	4C	IGRIDH	7C		IGRIDN	9B	NOPGES	44
SYMBOL	LOCATION	COMMON BLOCK / GROUPS	SYMBOL	LOCATION	SIZE	170	SYMBOL	LOCATION	SYMBOL	LOCATION
KTIARR	0	LARSF	4	KTLARF	7C		LARSF	80	KTPKL	44
SYMBOL	LOCATION	COMMON BLOCK / LIST	SYMBOL	LOCATION	SIZE	450C	SYMBOL	LOCATION	SYMBOL	LOCATION
LIST	0	NODOTS	450C	NODLS	4F10		ISMRLS	4F14		
SYMBOL	LOCATION	COMMON BLOCK / BUFFER	SYMBOL	LOCATION	SIZE	320A	SYMBOL	LOCATION	SYMBOL	LOCATION
INDATA	0	LINENO	3200	KOLUMN	3204					
SYMBOL	LOCATION	COMMON BLOCK / PLOT	SYMBOL	LOCATION	SIZE	255C	SYMBOL	LOCATION	SYMBOL	LOCATION
NODINT	0	X	4	Y	FA4		LARELD	1F44	IPACQD	2FE4
SYMBOL	LOCATION	COMMON BLOCK / RADIAN	SYMBOL	LOCATION	SIZE	FACE	SYMBOL	LOCATION	SYMBOL	LOCATION
NOCHAN	0	IGDFEN	4	IRHIT	8		IDOTRD	C		
SYMBOL	LOCATION	SUBPROGRAMS CALLED	SYMBOL	LOCATION			SYMBOL	LOCATION	SYMBOL	LOCATION
IAAIRN	0									
SYMBOL	LOCATION	EQUIVALENCE DATA MAP	SYMBOL	LOCATION			SYMBOL	LOCATION	SYMBOL	LOCATION
IACQNT	00	KACQNT	00	ITEMP1	0A		ITEMP4	0A		
SYMBOL	LOCATION	SCALAR MAP	SYMBOL	LOCATION			SYMBOL	LOCATION	SYMBOL	LOCATION
I	0C	J	00	INDATE	E4					
SYMBOL	LOCATION	ARRAY MAP	SYMBOL	LOCATION			SYMBOL	LOCATION	SYMBOL	LOCATION
ITEMP	0A	KTEMP	10A							

OPTIONS IN EFFECT ID,PHOTOIC, SOURCE, NOLIST, DECK, NOLOAD, MAP
 OPTIONS IN EFFECT NAME = MOVEAD * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 24, PROGRAM SIZE = 718
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PL018

PIRNUF / LARS 3031

```

0001      SUBROUTINE PLT18
C
C      PURPOSE  DRAW 18 SETS OF LABELLED PLOTS OF GREEN NUMBER VS BRIGHTNESS
C              (MULTIPLE X,Y VALUES REPRESENTED BY STARS)
C
C      GRAPH CHARACTERS ARE FIRST BLANKED.
C      IX,IY LOCATIONS ARE SET TO THE ACQUISITION NUMBER FOR 1ST DOT
C      RESET TO 0 FOR ADDITIONAL DOTS
C
0002      DIMENSION NODOTS(18)
C
0003      COMMON /LIST/ LIST(999,5), NODOTS, NOGRI, ISM-15(30)
0004      COMMON /MISC/ NOACQ, LNSOIL(6), IACQD(2,6), AI(5), NMFILE(2),
C      1 SEGM, DATE(4), IGRID(5), IGRID(5), NOPGS
C
0005      COMMON /RADIAN/NOCHAN, IGREEN, IRRIT, IODTRD(99,16)
0006      COMMON /GROUPS/KTLAPP, LARSP(30), KTLARF, LARSF(10), KTPXL(30)
C
0007      COMMON /PLOT/NPOT(18), X(1000), Y(1000), LABELD(1000), IPACQD(6)
C
C      DIMENSION IPICT(17,14,18), IXAXIS(14), LABELS(8)
0008      DIMENSION ILIST(18,5), JODTRD(18,16)
C
0009      DATA IPICT(1,1,1), IRLANK(1,1), ISTAR(1,1), IRLNK(1,1)
0010      DATA LABELS(1,1), IPICT(1,2,1), IPICT(1,3,1), IPICT(1,4,1), IPICT(1,5,1), IPICT(1,6,1), IPICT(1,7,1), IPICT(1,8,1)
C
C      INPUT
C      IODTRD--HORIZONTAL VALUES, VERTICAL VALUES
C      IODTRD--RADIANCE VALUES
C
C      OUTPUT
C      GRAPH
C
C      ***** SAVE 18 DOTS *****
C
C      MOVE DOTS TO 18 CONTIGUOUS LOCATIONS, SQUEEZING OUT BLANK DOTS
0012      MSTNDX = 1
0013      DO 10 I = 1,18
0014      LAST = I
C
C      SAVE GRID NUMBER FOR FIRST PIXEL ON THIS PLOT
C      IF (I.EQ. 1) NOGRID = LIST(MSTNDX,5)
C
C      CHECK FOR NON-BLANK LINE NUMBER
0015      IF (LIST(MSTNDX,2) .NE. 0) GO TO 40
C
C      BLANK LINE NUMBER, IGNORE PIXEL
C      MSTNDX = MSTNDX + 1
C      IF (MSTNDX .EQ. NODOTS) GO TO 20
0017      LAST = LAST + 1
0018      IF (LAST .LT. 1) RETURN
0019      IF (LAST .LT. 1) RETURN
0020      GO TO 40
0021      GO TO 40
C
C      NON-BLANK LINE NUMBER, MOVE DATA
0022      DO 45 JJ = 1,4
0023      ILIST(I,JJ) = LIST(MSTNDX,JJ)
0024      DO 48 JJ = 1,16
0025      JODTRD(I,JJ) = IODTRD(MSTNDX,JJ)
C
C      INCREMENT INDEX FOR DOT
C      MSTNDX = MSTNDX + 1
0026
C      END OF REPORT IF GRID CHANGE OR END OF PIXELS
C      IF (LIST(MSTNDX,5) .NE. NOGRID) GO TO 90
0027      IF (MSTNDX .GT. NODOTS) GO TO 90
0028      CONTINUE
0029
C
C      ***** PUT HEADING ON GRAPH *****

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PL002420
PL002430
PL002440
PL002450
PL002460
PL002470
PL002480
PL002490
PL002500
PL002510
PL002520
PL002530
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PL002990
PL003000
PL003010
PL003020
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PL003060
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PL003090
PL003100
PL003110
PL003120

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FILE PLOTIR

PIJONIE / LARS 3031

```

0030      90      CALL MCOPIR
0031      C
0032      95      WRITE (6,95) NODXIN
0033      95      FORMAT (77,53X,' GOIN ',I2)
0034      C
0035      C          ***** WRITE 3 GROUPS OF 6 PLOTS EACH *****
0036      DO 5000 LOOP = 1, LAST*6
0037      IFIRST = 1000
0038      IFEND = 1000 + 5
0039      IF (IFEND .GT. LAST) IFEND = LAST
0040      C
0041      C      CALCULATE THE DOT NUMBER
0042      DO 200 I = 1, 18
0043      NODOT(I) = IRLANK
0044      IF (MOD(JLIST(I,2),10).NE.0 .OR. MOD(JLIST(I,3),10).NE.0) GO TO 90
0045      NO = (JLIST(I,2)/10-1)*10 + JLIST(I,3)/10
0046      CALL AFRMIN(NO,3,NODOT(I))
0047      90      CONTINUE
0048      WRITE (6,199)
0049      199      FORMAT (77,1H,6(' DOT LINE PIXEL LABEL '))
0050      WRITE (6,200) (NODOT(I),JLIST(I,2),JLIST(I,3),JLIST(I,1),
0051      I = IFIRST,IFEND)
0052      200      FORMAT (5(1X,4X,215,3X,41,31))
0053      C
0054      C          ***** CLEAR PLOT DATA AWAY *****
0055      DO 300 I = 1, 17
0056      DO 300 J = 1, 14
0057      DO 300 K = 1, 14
0058      IPICT(I,J,K) = IRLANK
0059      300      CONTINUE
0060      C
0061      C          ***** LOCATE AND STORE POINTS IN PLOT DATA ARRAY *****
0062      DO 2500 I = IFIRST,IFEND
0063      DO 2500 NDXPD = 2,NODXAN,2
0064      C
0065      C      CALC Y = RADIANCE VALUE - SOIL LINE + FACTOR TO MAKE IT POSITIVE / 5
0066      C      SOIL LINE ALREADY SUBTRACTED IN SUBROUTINE RORADD
0067      NDX = NDXPD/2
0068      IY = (JNDOT(I,NDXPD) + 10.) / 5. + .5
0069      IGRNDX = NDXPD - 1
0070      IX = (JNDOT(I,IGRNDX) - 29) / 5. + .5 + 1
0071      C
0072      C      CHECK FOR VALUES IN BOUNDS OF PLOT
0073      IF (IX .LT. 1) IX = 1
0074      IF (IY .LT. 1) IY = 1
0075      IF (IY .GT. 14) IY = 14
0076      IF (IX .GT. 17) IX = 17
0077      C
0078      C      STORE VALUE IN PLOT
0079      C      IF LOCATION PREVIOUSLY USED, REPLACE WITH SYMBOL
0080      KURDOT = IPICT(IX,IY,I)
0081      IF (KURDOT .EQ. IRLANK) IPICT(IX,IY,I) = LABELS(NDX)
0082      IF (KURDOT .NE. IRLANK) IPICT(IX,IY,I) = ISTAR
0083      2500      CONTINUE
0084      C
0085      C      WRITE LINE
0086      C          ***** WRITE LINES OF PLOT *****
0087      DO 2000 I = 1, 14
0088      LINE = 15 - I
0089      IRLINE = LINE * 5 - 10
0090      IF (MOD(IRLINE,2).EQ.0) WRITE (6,2800) (IRLINE,(IPICT(J,LINE,K),
0091      J=1,17), K=IFIRST,IFEND)
0092      IF (MOD(IRLINE,2).NE.0) WRITE (6,2810) (IPEROD,(IPICT(J,LINE,K),
0093      J=1,17), K=IFIRST,IFEND)
0094      2800      FORMAT (1H,6(13,17A1,1X))
0095      2810      FORMAT (1H,6(13,41,17A1,1X))
0096      2900      CONTINUE
0097      C
0098      C          ***** WRITE X AXIS *****

```

PL003130
 PL003140
 PL003150
 PL003160
 PL003170
 PL003180
 PL003190
 PL003200
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 PL003230
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 PL003950
 PL003960
 PL003970
 PL003980
 PL003990
 PL004000

FORTRAN IV A LEVEL 21

PLT1A

DATE = 80157

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PAGE 003

FILE PLOT1A

PUMQUE / LARS 3031

```
0073 C
0074 2950 WRITE (6,2950)
0075 5000 CONTINUE
0076 C GO TO NEXT PAGE. IF MORE PIXELS
0077 IF (MSTNDX .LT. MNDOTS) GO TO 10
0078 RETURN
0078 END
```

```
PL003440
PL003450
PL003460
PL003470
PL003480
PL003490
PL003500
PL003510
PL003520
PL003530
PL003540
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FORTRAN IV G LEVEL 21
FILE PLOT1R

PLT1R

DATE = 80157

14/43/30

PAGE 0134

PURDUE / LAHS 3031

SYMBOL LIST	LOCATION 0	SYMBOL NOODTS	COMMON BLOCK /LIST LOCATION 4F0C	SYMBOL NOCLS	MAP SIZE LOCATION 4E10	SYMBOL ISMBLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL NOACQ SECM	LOCATION 0 6R	SYMBOL LMSOIL DATE	COMMON BLOCK /MISC LOCATION 4 6C	SYMBOL IACONT IGPIDR	MAP SIZE LOCATION 1C 7C	SYMBOL AI IGPIDN	LOCATION 4C 90	SYMBOL NMFILE NOPGES	LOCATION 50 24
SYMBOL NOCHAN	LOCATION 0	SYMBOL IGREEN	COMMON BLOCK /RADIAN LOCATION 4	SYMBOL IRPIT	MAP SIZE LOCATION R	SYMBOL IDOTRD	LOCATION C	SYMBOL	LOCATION
SYMBOL KTIARR	LOCATION 0	SYMBOL LARSR	COMMON BLOCK /GROUPS LOCATION 4	SYMBOL KTLARF	MAP SIZE LOCATION 7C	SYMBOL LARSF	LOCATION 50	SYMBOL KTPXL	LOCATION FH
SYMBOL NPPOINT	LOCATION 0	SYMBOL Y	COMMON BLOCK /PLOT LOCATION 4	SYMBOL Y	MAP SIZE LOCATION FA4	SYMBOL LARELD	LOCATION 1F44	SYMBOL IPACQD	LOCATION 2E14
SYMBOL HENDIR	LOCATION 15C	SYMBOL TRCOMM	SUBPROGRAMS CALLED LOCATION 160	SYMBOL AFPMIN	LOCATION 164	SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL IPEDID T TETST NOEXRD KIPROD	LOCATION 194 1A8 1RC 100 1E4	SYMBOL TRLANK LAST TEND NOX LINE	SCALAR MAP LOCATION 109 1AC 1C0 104 1ER	SYMBOL ISTAP NOGRID NO TY LRLNE	LOCATION 19C 1R0 1C4 108 1EC	SYMBOL THLNK JJ J IGRNDX	LOCATION 1A0 1R4 1CR 1DC	SYMBOL HSTNDX LOOP K IX	LOCATION 104 104 1CC 100
SYMBOL NOODT JDOTRD	LOCATION 1F0 46FR	SYMBOL IPCT	ARRAY MAP LOCATION 23R	SYMBOL IXAXIS	LOCATION 452R	SYMBOL LARELS	LOCATION 4560	SYMBOL JLIST	LOCATION 4540
SYMBOL 05 2050	LOCATION 4R6R 4RCF	SYMBOL 199	FORMAT STATEMENT MAP LOCATION 447R	SYMBOL 200	LOCATION 4R9A	SYMBOL 2800	LOCATION 4RAD	SYMBOL 2R10	LOCATION 4480

OPTIONS IN EFFECT 10.FRCOIC.SOURCE.NOIIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = PLT1R * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 78.PHOGRAM SIZE = 21450
 STATISTICS NO DIAGNOSTICS GENERATED

FILE PLOT1A

PURDUE / LARS 3031

0001

SUBROUTINE HEQPIA

C PURPOSE: WRITE REPORT HEADING

C ***** INPUT *****

C DATE(4) DATE REPORT WRITTEN
 C IACQNT(4) ACQUISITION DATES
 C SEGM SEGMENT DATE
 C LARSE CLUSTER LABELS IN FILE
 C LNSOIL(4) SOIL LINES

C ***** OUTPUT *****

C REPORT HEADING WRITTEN

0002

0003

C COMMON /GROUPS/KTLARR,LARSP(30),KTLARF,LARSE(30),KTPXL(30)
 C COMMON /MISC/ NOACO, LNSOIL(6), IACQNT(2,6), AT(5), NMFILE(2),
 C 1 SEGM,DATE(4),TGRIDR(5),IGRIDN(5),NOPGES,NOLNES,KURACO

0004

0005

C WRITE (6,100)
 C 100 FORMAT (1H1,35X,'*GREEN NUMBERS VS BRIGHTNESS THEN TIME*')

0006

0007

C WRITE SEGMENT NUMBER
 C WRITE (6,200) SEGM,DATE,(LARSE(I),I=2,KTLARF)
 C 200 FORMAT (1H0,'SITE = ',A4,' DATE GENERATED = ',A4,' 10X',
 C 1 'CATEGORIES PLOTTED ' , 15(A1,' '),' /,80X,15(A1,' '))

0008

0009

C WRITE ACQUISITION DATES
 C WRITE (6,300) IACQNT
 C 300 FORMAT ('ACQUISITION = ',6(2A4,2X))

0010

0011

C WRITE SOIL LINES
 C WRITE (6,400) (LNSOIL(I),I=1,NOACO)
 C 400 FORMAT (' SOIL LINES =',6(15,5X))

0012

C RETURN

0013

C END

PL003940
 PL003950
 PL003960
 PL003970
 PL003980
 PL003990
 PL004000
 PL004010
 PL004020
 PL004030
 PL004040
 PL004050
 PL004060
 PL004070
 PL004080
 PL004090
 PL004100
 PL004110
 PL004120
 PL004130
 PL004140
 PL004150
 PL004160
 PL004170
 PL004180
 PL004190
 PL004200
 PL004210
 PL004220
 PL004230
 PL004240
 PL004250
 PL004260
 PL004270
 PL004280
 PL004290
 PL004300
 PL004310
 PL004320
 PL004330
 PL004340

PAGE 0002

PURDUE / LAWS 3031

SYMBOL KTLABF	LOCATION 0	COMMON BLOCK / GROUPS / MAP SYMBOL LAHSF	LOCATION 4	MAP SYMBOL KTLABF	SIZE LOCATION 7C	170	SYMBOL LAHSF	LOCATION 80	SYMBOL KTPXL	LOCATION 18
SYMBOL NOACQ SEGM NOINFS	LOCATION 0 6A AR	COMMON BLOCK / MISC SYMBOL INSOIL DATE KIRACQ	LOCATION 4 6C AC	MAP SYMBOL TACDNT IGRIDR	SIZE LOCATION 1C 7C	40	SYMBOL AT IGRIDN	LOCATION 4C 90	SYMBOL NMFILE NPGES	LOCATION 50 A4
SYMBOL TRCOMP	LOCATION A0	SUBPROGRAMS CALLED SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	LOCATION		SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	LOCATION
SYMBOL T	LOCATION A4	SCALAR MAP SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	LOCATION		SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	LOCATION
SYMBOL 100	LOCATION AR	FORMAT STATEMENT MAP SYMBOL 200	LOCATION 04	SYMBOL 300	LOCATION 12F		SYMBOL 400	LOCATION 14B	SYMBOL LOCATION	LOCATION

```
*OPTIONS IN EFFECT*  IN.FPCDIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
*OPTIONS IN EFFECT*  NAME = HENPL4 * LINECNT = 75
*STATISTICS*          SOURCE STATEMENTS = 13,PROGRAM SIZE = 584
*STATISTICS*  NO DIAGNOSTICS GENERATED
*STATISTICS*  NO DIAGNOSTICS THIS STEP
```

ORIGINAL PAGE IS
OF POOR QUALITY

FILE WQTRIG

PURPOSE / LAWS 3031

```

C PURPOSE: REWRITE FILE 27 AS FILEPR, FILEII, OR FILEGT (UNIT 28)
C
C FORMAT OF LIST FILE27:
C   WORDS(1+999)   DESCRIPTION
C   LIST(1,1)      LINE NUMBER
C   LIST(1,2)      COLUMN NUMBER(SAMPLE)
C   LIST(1,3)      CLUSTER NUMBER
C   LIST(1,4)      GRID OVERLAY TYPE USED (1-5)
C   LIST(1,5)      LABEL
C
C FORMAT OF FILEPR, FILEII, OR FILEGT (UNIT 28)
C   LIST(1,1)      LABEL
C   LIST(1,2)      LINE
C   LIST(1,3)      COLUMN
C
0001 COMMON/MISC/NOACQ,SOILLN(6),IACQDT(6,2),AI(5),NMFILF(2),SEGMA,
C   1 DATE(4),IGRIDR(5),IGRIDN(5),NORGF5,INDEXC(30),NDEX2,ITOT2
0002 DIMENSION LIST(999,5)
0003 DIMENSION NOTE(8)
0004 DATA IFND/'*FND'/'
C
C READ FIRST RECORD FOR NUMBER OF RECORDS WRITTEN
C ALSO WRITE THAT RECORD ON OUTPUT FILE 28
C
0005 READ(27,25,FND=1000) LTOTAL,NOTE
0006 25 FORMAT (14,8A4)
0007 WRITE (3,27) LTOTAL,NOTE
0008 27 FORMAT (' LTOTAL AND NOTE ',15,2X,8A4)
0009 WRITE (28,25) LTOTAL,NOTE
C
C READ FILE 27 TO GET AI'S LIST
C
0010 ITOTAL = 1
0011 50 READ(27,100,FND=1000) (LIST(ITOTAL,J),J=1,5)
0012 100 FORMAT (A4,4I4)
C CHECK FOR '*FND'
C
0013 IF (LIST(ITOTAL,1) .EQ. IFND) GO TO 800
C
C WRITE FILEPR, FILEII, OR FILEGT
C
0014 WRITE(28,200) LIST(ITOTAL,2),LIST(ITOTAL,3)
0015 200 FORMAT (4X,2I4,2X)
C
C WRITE INFORMATION IN NEW FILE TO TERMINAL
C
C ADD 1 TO NUMBER OF RECORDS PROCESSED
C
0016 ITOTAL = ITOTAL + 1
0017 GO TO 50
C
C *FND HAS BEEN FOUND
C COPY REMAINING RECORDS AFTER READING THEM
C
0018 800 WRITE (28,500) LIST(ITOTAL,1)
0019 500 FORMAT (A4)
0020 READ (27,510) (NOTE(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5)
0021 510 FORMAT (4A4,5(14,1X,14,2X))
0022 WRITE (28,510) (NOTE(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5)
0023 READ (27,520) DATE
0024 520 FORMAT (4A4)
0025 WRITE (28,520) DATE
C
C EOF REACHED

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WQTRIG0010
WQTRIG0020
WQTRIG0030
WQTRIG0040
WQTRIG0050
WQTRIG0060
WQTRIG0070
WQTRIG0080
WQTRIG0090
WQTRIG0100
WQTRIG0110
WQTRIG0120
WQTRIG0130
WQTRIG0140
WQTRIG0150
WQTRIG0160
WQTRIG0170
WQTRIG0180
WQTRIG0190
WQTRIG0200
WQTRIG0210
WQTRIG0220
WQTRIG0230
WQTRIG0240
WQTRIG0250
WQTRIG0260
WQTRIG0270
WQTRIG0280
WQTRIG0290
WQTRIG0300
WQTRIG0310
WQTRIG0320
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WQTRIG0340
WQTRIG0350
WQTRIG0360
WQTRIG0370
WQTRIG0380
WQTRIG0390
WQTRIG0400
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WQTRIG0620
WQTRIG0630
WQTRIG0640
WQTRIG0650
WQTRIG0660
WQTRIG0670
WQTRIG0680
WQTRIG0690
WQTRIG0700
WQTRIG0710

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FILE WRTRIG

PURDUE / LARS 3031

0026	C		WR000720
0027	1000	ITOTAL = ITOTAL - 1	WR000730
0028		IF (LTOTAL.NE. ITOTAL) WRITE (3,530) ITOTAL,LTOTAL	WR000740
0029	530	FORMAT(' NUMBER OF RECORDS READ',I5,' DOES NOT EQUAL NUMBER OF REC	WR000750
		ORDS REQUIRED',I5)	WR000760
0029		IF (LTOTAL.NE. ITOTAL) WRITE(6,530) ITOTAL,LTOTAL	WR000770
0030	C		WR000780
0031		WRITE(3,400) LTOTAL	WR000790
0032	400	FORMAT('0 NUMBER OF PIXELS OF LIST ',I6)	WR000800
0033		STOP	WR000810
		END	WR000820

FORTRAN IV G LEVEL 21
FILE WRTBIG

WRTBIG

DATE = R0157

14/41/43

PAGE 0003

PURQUE / LAWS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	SYMBOL	LOCATION	MAP SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACD	0	SOILLN	4	IACQNT	1C	AI	4C	NMFILE	60
SECM	68	DATE	4C	IGNIDR	7C	IGNIDN	90	NOPGES	84
INDEXC	88	INDEX2	120	ITOT2	124				
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TRCONB	00	SHRPPROGRAMS CALLED							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TEMD	04	SCALAR MAP							
		ITOTAL	08	ITOTAL	0C	J	50	I	E4
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
LIST	EA	ADDAV MAP							
		NOTE	4FF4						
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
25	4F14	27	4F1C	100	4F39	200	4F41	500	4F49
510	4F4F	520	4F60	530	4F66	400	4F61		

OPTIONS IN EFFECT ID,FRONTIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = WRTBIG * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 33, PROGRAM SIZE = 21422
 STATISTICS NO DIAGNOSTICS GENERATED

FILE COMPARE

PURQUE / LARS 3031

```

C PURPOSE: COMPARE ORIGINAL AI'S LIST (UNIT 27) WITH UPDATED ANALYST
C FILE FILEPR, FILEII, OR FILEGT. PRINT DISCREPANCY LIST
C
C FORMAT OF LIST FILE27
C
C      WORDS(I=999)      DESCRIPTION
C      LIST(I,1)         LABEL
C      LIST(I,2)         LINE NUMBER
C      LIST(I,3)         COLUMN NUMBER(SAMPLE)
C      LIST(I,4)         CLUSTER NUMBER
C      LIST(I,5)         GRID OVERLAY TYPE USED (1-5)
C
C
C FORMAT OF FILE FOR QR, II, OR GT
C
C THIS FORMAT IS THE SAME AS FILE27 EXCEPT THE LABELS MAY BE INCLUDED
C
C VARIABLES:
C      IPRINT = 0      NO DISCREPANCY
C      IPRINT = 1      NO LABEL IS PRESENT
C      IPRINT = 2      LINE AND/OR SAMPLE IS DIFFERENT
C      IPRINT = 3      NO LABEL AND LINE AND/OR SAMPLE IS DIFFERENT
C
0001      COMMON/MISC/NOACQ,INSOIL(6),IACQNT(2,6),AI(5),NFILE(2),SEGM,
0002      1 DATE(4),IGRIDR(5),IGRIDN(5),NORGES
0003      COMMON /INFO/NOTE(9),NUMLBL,IUPDATE(4,10),LRLDAT(99,5),LSTTOT
0004      1,NOTE1(4),NIIDATE
0005      COMMON /LIST/LIST(999,5), NODOTS, NOCLS, ISMRLS(10)
0006
C      DIMENSION IMDOT(4)
C
0007      DATA IRLNK/1,1/
0008      DATA IZERO/10,1/
C
C READ AI'S LIST (UNIT27)
C
C
C      CALL SETP10
C
C *****
C *****
0009      CALL READAT
C
C PRINT IR SUMMARY
C
0010      CALL TRSUM
C
C
C      CALL REDLIST
C
C COMBINE 2 FILES
C
0011      CALL COMBLA
C
C WRITE HEADING FOR REPORT
C
0012      CALL HEADII
C
0013      NORGES = 0
0014      KOUNT = 0
C
C
0015      DO 500 IA=1,5
0016      TANY = 0
C
C SET LINES ON PAGE TO MAXIMUM TO FORCE HEADING IF FIRST GRID
C

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COM00010
COM00020
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COM00680
COM00690
COM00700
COM00710

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FILE COMPARE

PURQUE / LARS 3031

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0017      IF (IA .EQ. 1) KOUNT = 70
C
C      SET LIMITS TO GRID
C
0018      IFIRST = IGRIDR(IA)
0019      LAST = IGRIDN(IA)
C
C      IGNORE GRID IF NO DOTS
C
0020      IF (IFIRST .EQ. 0) GO TO 500
0021      DO 400 IR=IFIRST,LAST
C
C
C      HAVE DATA TO PRINT
C
0022      IF (IRIDAT(IR,1) .EQ. IRLNK) GO TO 80
0023      IF (IRIDAT(IR,2) .EQ. LIST(IR,2) .AND. LRLDAT(IR,1) .EQ. LIST(IR,3))
C
C      GO TO 400
0024      R0 KOUNT = KOUNT + 1
0025      IANY = IANY + 1
0026      DO 90 I=1,4
0027      ON IMDOT(I) = IRLNK
C
0028      IF (KOUNT .LE. 70) GO TO 120
C
C      NEW PAGE
C
0029      CALL GRIDHD
0030      CALL GRIDPIX (IA)
0031      KOUNT = 7
0032      IF (NODGES .EQ. 1) KOUNT = KOUNT + 9 + 2* NOAC0
0033      GO TO 200
C
C      CHECKING FOR NEW GRID ON OLD PAGE
C
0034      120 IF (IANY .NE. 1) GO TO 200
C
C      WRITE NEW GRID TITLE WITHIN SAME PAGE
C
0035      CALL GRIDPIX (IA)
0036      KOUNT = KOUNT + 9
C
C      HEADING WRITTEN. WRITE LINES
C
0037      200 LINE = LIST(IR,2)
0038      ISAMPL = LIST(IR,3)
0039      IF (MOD(LINE,10) .NE. 0) GO TO 250
0040      IF (MOD(ISAMPL,10) .NE. 0) GO TO 250
0041      IDOTCL = (LINE/10 - 1)*10 + ISAMPL/10
0042      CALL RNT4A1(IMDOT,4,IDOTCL)
0043      IF (IMDOT(1) .NE. IZERO) GO TO 250
0044      IMDOT(1) = IRLNK
0045      IF (IMDOT(2) .NE. IZERO) GO TO 250
0046      IMDOT(2) = IRLNK
0047      IF (IMDOT(3) .NE. IZERO) GO TO 250
0048      IMDOT(3) = IRLNK
0049      250 WRITE(4,300)IMDOT,LIST(IR,2),LIST(IR,3),(LRLDAT(IR,I),I=1,3)
0050      300 FORMAT (46X,4A1,2X,14.2X,14.6X,A2,3X,14.2X,14)
C
C
C      400 CONTINUE
0051      500 CONTINUE
0052      LABEL NOWRLANK
C
C      ALL COMPARES HAVE BEEN COMPLETED
C
0053      1000 WRITE (3,400)
0054      400 FORMAT (//,' ALL COMPARES COMPLETED. ')
0055      STOP
0056      END

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COM00720
COM00730
COM00740
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COM01400

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FORTRAN IV G LEVEL 21
FILE COMPARE

COMPARE

DATE = 80157

14/40/57

PAGE 0003

PURDUE / LARS 3031

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACD	0	ENSOIL	4	IACODT	1C	AI	4C	NMFILE	60
SEGM	6R	DATE	4C	IGRIDH	7C	IGRIDN	90	NOPGES	AA
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
NOTE	0	NHRLR	26	IINDATE	24	LRLDAT	64	LSTTOT	4F09
NOTE1	4FD4	NHDATE	4FF4						
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
LIST	0	NODOTS	4F0C	NODLS	4E10	ISMRLS	4F14		
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SETPID	114	DEANAT	114	INCSIM	11C	WDLST	120	COMMLA	124
HEADII	12R	GRDHEN	12C	GRDPHX	130	HNI4A1	134	INCOMW	13R
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TRIMK	160	17F40	144	KOUNT	169	IA	14C	IANY	170
1710ST	174	LAST	17R	IR	17C	I	180	LINE	184
15AMPL	18R	IDOTCL	18C						
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IMDOT	190								
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
300	1A0	600	19C						

OPTIONS IN EFFECT ID,FRCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
 OPTIONS IN EFFECT NAME = COMPARE, LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 54, PROGRAM SIZE = 1542
 STATISTICS NO DIAGNOSTICS GENERATED

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OF POOR QUALITY

FILE COMPARE

PURDUE / LARS 3031

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0001      SUBROUTINE HEADAT
C
C      PURPOSE: READ AT'S FILE FOR LATER COMPARISON
C
C      COMMON /LIST/LIST(999,5), NODOTS, NOCLS, ISMRES(30)
0002      COMMON /INFO/NOTE(4), NUMLRI, IUDATE(4,10), LRLDAT(999,5), LSTTOT
C      1, NOTE(4), NUDATS
0003      COMMON /MISC/MOACT, INSOIL(6), IACONT(2,6), AI(5), FILE(2), SEGM,
C      1 DATE(4), IGRIDR(4), IGRIDN(5), NORGES
0004      DATA IEND//END//
0005      DATA IRLNK// //
C
C      READ NUMBER OF DOTS
C
0006      NUDATE = 0
0007      READ (24,13) LSTTOT,NOTE
0008      10 FORMAT (I4,8A4)
C
0009      NUMLRI = 0
C      READ DOT RECORDS
C
0010      NODOTS = 1
0011      5 READ (20,20,FNO=1000) (LRLDAT(NODOTS,J),J=1,5)
0012      20 FORMAT (A4,4I4)
C
C      CHECK FOR END
C
0013      IF (LRLDAT(NODOTS,1) .EQ. IEND) GO TO 100
C
C      CHECK FOR NONBLANK LABEL AND COUNT
0014      IF (LRLDAT(NODOTS,1) .NE. IRLNK) NUMLRI = NUMLRI + 1
C
0015      NODOTS = NODOTS + 1
0016      GO TO 5
C
0017      100 NODOTS = NODOTS - 1
0018      WRITE (3,996) NODOTS
0019      996 FORMAT (1X,' NODOTS = ',I5)
C
C      READ THE REMAINDER OF INFORMATION ON AT'S FILE
C
C
C      READ BEGINNING AND ENDING ADDRESSES FOR EACH GRID
C
0020      READ (20,30,FNO=1000) (NOTE(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5)
0021      30 FORMAT (4A4,5(I4,1X,I4,2X))
0022      WRITE (3,998) (NOTE(I),I=1,4), (IGRIDR(I),IGRIDN(I),I=1,5)
0023      998 FORMAT (1X,4A4,5(I4,1X,I4,2X))
0024      200 NUDATE = NUDATE + 1
0025      IF (NUDATE .GT. 10) GO TO 999
0026      WRITE (3,997) NUDATE
0027      997 FORMAT (1X,NUDATE = ',I6)
0028      READ (24,40,FNO=999) (IUDATE(I,NUDATE),I=1,4)
0029      40 FORMAT (4A4)
0030      GO TO 200
0031      999 NUDATE = NUDATE - 1
0032      WRITE (3,991) NUDATE
0033      991 FORMAT (1X,SUBTRACT NUDATE ',I4)
0034      RETURN
0035      END

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COM01410
 COM01420
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 COM01500
 COM01510
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 COM01590
 COM01600
 COM01610
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 COM01860
 COM01870
 COM01880
 COM01890
 COM01900
 COM01910
 COM01920
 COM01930
 COM01940
 COM01950
 COM01960
 COM01970
 COM01980
 COM01990
 COM02000
 COM02010
 COM02020

Page 6 of 7

PIRDUE / LARS 3031

[illegible]

```
*OPTIONS IN EFFECT* ID,FHC01C,SOURCE,NOLIST,DECK,NOLoad,MAP
*OPTIONS IN EFFECT* NAME = DFANAL * LINEENT = 75
*STATISTICS* SOURCE STATEMENTS = 35,PROGRAM SIZE = 1240
*STATISTICS* NO DIAGNOSTICS GENERATED
```

FORTRAN IV G LEVEL 21

GRDHED

DATE = 80157

14/40/57

PAGE 0031

FILE COMPARE

PURQUE / LARS 3031

```

0001      SUBROUTINE GRDHED
0002      COMMON/MISC/NOACQ,INSOIL(6),IACQDT(2,6),AI(5),NMFILE(2),SEGM,
      1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES
      C
      C PRINT SITE AND DATE GENERATED
      C
0003      IF (NOPGES .EQ. 0) GO TO 150
      C
      C WRITE SITE AS NEW PAGE
      C
0004      100 WRITE (6,20) SEGM,DATE
0005      20 FORMAT (1H1,42X,'SITE = ',44,10X,'DATE GENERATED = ',4A4)
0006      150 NOPGES = NOPGES + 1
0007      RETURN
0008      END

```

```

COM02010
COM02040
COM02050
COM02060
COM02070
COM02080
COM02090
COM02100
COM02110
COM02120
COM02130
COM02140
COM02150
COM02160
COM02170

```

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FORTRAN IV G LEVEL 21
FILE COMPARE

GROWN

DATE = 80157

14/40/57

PAGE 0002

PURDUE / LARS 3031

COMMON BLOCK / MISC		/ MAP SIZE					
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACO	0	LNSOIL	4	IGNON	1C	AT	4C
SECM	6A	DATE	4C	IGNON	7C	IGNON	90
SUBPROGRAMS CALLED							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TRCON	A0						
FORMAT STATEMENT MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
20	A4						

OPTIONS IN EFFECT ID.FRODIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = GROWN . LINECNT = 75
 STATISTICS SOURCE STATEMENTS = A.PROGRAM SIZE = 288
 STATISTICS NO DIAGNOSTICS GENERATED

FORTRAN IV G LEVEL 21

GRIDPIX

DATE = 80157

14/40/57

PAGE 0001

FILE COMPARE

PIPPHIE / LARS 3031

0001	SUBROUTINE GRIDPIX (IWHGRD)	COM02140
	CC WRITE GRID HEADING	COM02140
	CC	COM02200
	CC	COM02210
0002	WRITE (6,30) IWHGRD	COM02210
0003	30 FORMAT (//,62X,'GRID ',[2,//])	COM02210
0004	WRITE (6,40)	COM02210
0005	40 FORMAT (/,49X,'ORIGINAL DOTS',10X,'NEW DOTS')	COM02210
0006	WRITE (6,50)	COM02210
0007	50 FORMAT (4X,'DOT NO LINE PIXEL',3X,'LABEL',2X,'LINE PIXEL')	COM02210
0008	RETURN	COM02210
0009	END	COM02210

FORTRAN IV 6 LEVEL 21
FILE COMPARE

GRDPIX

DATE = 80157

14/40/57

PAGE 0002

PURDUE / LARS 3031

SYMBOL TRCOM#	LOCATION 90	SYMBOL SUBPROGRAMS CALLED LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL TWHGR0	LOCATION 94	SYMBOL SCALAR MAP LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL 30	LOCATION 98	SYMBOL 40 FORMAT STATEMENT MAP LOCATION 49	SYMBOL 50 LOCATION C9	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION

OPTIONS IN EFFECT ID,ERCDIC,SOURCE,NOLIST,DECK,NOLOAD,MAP
OPTIONS IN EFFECT NAME = GRDPIX * LINECNT = 75
STATISTICS SOURCE STATEMENTS = 9,PROGRAM SIZE = 448
STATISTICS NO DIAGNOSTICS GENERATED

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FILE COMPARE

PURDUE / LARS 3031

0001	SUBROUTINE REDLST	COM02300
	C READ LIST FILE (UNIT 27)	COM02310
	C	COM02320
	C	COM02330
	C	COM02340
	C	COM02350
	C	COM02360
0002	COMMON /LIST/LIST(999,5), NODOTS, NOCLS, ISMBLS(30)	COM02370
0003	COMMON /INFO/NOTE(8), NUMLPL, IUDATE(4,10), LRLDAT(999,5), LSTTOT	COM02380
	1, NOTE1(4), NUDATE	COM02390
	C	COM02400
0004	DATA IEND/'*END'/'	COM02410
0005	READ (27,10) NTOTAL	COM02420
0006	10 FORMAT (I4)	COM02430
	C	COM02440
	C	COM02450
	C	COM02460
	C	COM02470
0007	IPEC = 1	COM02480
0008	100 READ (27,20,FEND=1000) (LIST(IPEC,J),J=1,5)	COM02490
0009	20 FORMAT (A4,4I4)	COM02500
0010	IF (LIST(IPEC,1)) .EQ. IEND) GO TO 1000	COM02510
0011	IPEC = IPEC + 1	COM02520
0012	GO TO 100	COM02530
	C	COM02540
0013	1000 RETURN	COM02550
0014	END	

FORTRAN IV G LEVEL 21
FILE COMPARE

REDLIST

DATE = R0157

14/40/57

PAGE 0002

PURDUE / LARS 3031

SYMBOL LIST	LOCATION 0	SYMBOL N0DOT5	COMMON BLOCK /LIST LOCATION 4F0C	SYMBOL N0CLS	MAP SIZE LOCATION 4E10	4FBC	SYMBOL ISMHLS	LOCATION 4E14	SYMBOL	LOCATION
SYMBOL NOTE NOTE1	LOCATION 0 4ED4	SYMBOL N0MLRL N0DATE	COMMON BLOCK /INFO LOCATION 20 4EF4	SYMBOL I0DATE	MAP SIZE LOCATION 24	4FFA	SYMBOL LRLOAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4ED0
SYMBOL TACOMM	LOCATION RA	SYMBOL	SUPPROGRAMS CALLED LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL TFND	LOCATION RC	SYMBOL NTOTAL	SCALAR MAP LOCATION C0	SYMBOL IPEC	LOCATION C4		SYMBOL J	LOCATION CR	SYMBOL	LOCATION
SYMBOL 10	LOCATION CC	SYMBOL 20	FORMAT STATEMENT MAP LOCATION D0	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION

OPTIONS IN EFFECT ID.FRODIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = REDLIST * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 14 PROGRAM SIZE = 50R
 STATISTICS NO DIAGNOSTICS GENERATED

FILE COMPARE

PURDUE / LARS 3031

0001	SUBROUTINE IRSIIM	COM02540
	C	COM02570
	C WRITE IR SUMMARY	COM02580
	C	COM02590
0002	COMMON/MISC/NOACQ,INSOIL(6),TACQDT(2,6),AI(5),NMFILE(2),SEGM,	COM02600
	1 DATE(4),IGRIDR(5),IGRIDN(5),NOPGES	COM02610
0003	COMMON /INFO/NOTE(9),NUMLRL,TUDATE(4,10),LRDAT(999,5),LSTTOT	COM02620
	1 ,NOTE1(4),NUDATE	COM02630
	C	COM02640
	C WRITE HEADING	COM02650
	C	COM02660
0004	CALL HEADIR	COM02670
	C	COM02680
0005	WRITE (6,100) NMFILE	COM02690
0006	100 FORMAT (///,43X,'LAREL FILE NAME = ',2A4)	COM02700
0007	WRITE (6,110) AI	COM02710
0008	110 FORMAT (///,43X,'ANALYST NAME = ',5A4)	COM02720
0009	WRITE (6,120) (I,NUDATE(I),I=1,4)	COM02730
0010	120 FORMAT (///,43X,'DATE LARELS UPDATED = ',4A4)	COM02740
0011	WRITE (6,130) NUMLRL	COM02750
0012	130 FORMAT (///,43X,'NO OF LARELED DOTS = ',I4)	COM02760
0013	RETURN	COM02770
0014	END	COM02780

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FORTRAN IV G LEVEL 21
FILE COMPARE

IRSUM

DATE = 80157

14/40/57

PAGE 0002

PURDUE / LARS 3031

SYMBOL	LOCATION	COMMON BLOCK / MISC	SYMBOL	LOCATION	MAP SIZE	SYMBOL	LOCATION	SYMBOL	LOCATION
NOACQ SEGM	0 AR	LNSTL DATE	4 AC	IACODT IGRIDR	1C 7C	AI IGRIDN	4C 90	NMFILE NOPGES	60 A4
NOTE NOTE1	0 4ED4	COMMON BLOCK / INFO	SYMBOL NUMLRL NUMDATE	LOCATION 20 4FF4	MAP SIZE LOCATION 24	4FF8 LRLOAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4ED0
SYMBOL HEADTR	LOCATION A0	SUPPROGRAMS CALLED	SYMBOL IRCOMW	LOCATION A4	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL I	LOCATION AR	SCALAR MAP	SYMBOL LOCATION	LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION
SYMBOL 100	LOCATION AC	FORMAT STATEMENT MAP	SYMBOL 110 CP	LOCATION 120 F6	SYMBOL 130	LOCATION 108	SYMBOL LOCATION	SYMBOL LOCATION	SYMBOL LOCATION

OPTIONS IN EFFECT ID,FRCDIC,SOURCE,NOLIST,DECK,NOLoad,MAP
 OPTIONS IN EFFECT NAME = IRSUM * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 14,PROGRAM SIZE = 600
 STATISTICS NO DIAGNOSTICS GENERATED

FILE COMPARE

PURDUE / LARS 3031

```

0001      SUBROUTINE COMRLA                                COM02700
C      WRITE FILE THAT COMBINES LIST AND A1'S           COM02800
C                                                         COM02810
C                                                         COM02820
0002      COMMON/MISC/NOACH,I NSOIL(4),IACQNT(2,6),AI(5),NMFILE(2),SEGM, COM02830
I DATE(4),IGRIOR(5),IGRIDN(5),NORPES COM02840
0003      COMMON /INFO/NOTE(8),NUMRL,IUDATE(4,10),LRLOAT(999,5),LSTTOT COM02850
I ,NOTE1(4),NUDATE COM02860
0004      COMMON /LIST/LIST(999,5), NODOTS, NOCLS,ISMRLS(10) COM02870
C                                                         COM02880
C ***** COM02890
C ***NOTE ***** COM02900
C IF LARFL FOR A NULL LINE IS BLANK THE SECOND PART COM02910
C OF P14 IGNORES THE DATA COM02920
C ***** COM02930
C                                                         COM02940
C                                                         COM02950
0005      WRITE (29,20) LSTTOT,NOTE COM02960
0006      20 FORMAT (I4,PA4) COM02970
0007      DO 100 I=1,LSTTOT COM02980
0008      WRITE (29,30) (LRLOAT(I,J),J=1,3), (LIST(I,K),K=4,5) COM02990
0009      30 FORMAT (A4,4I4) COM03000
0010      100 CONTINUE COM03010
C                                                         COM03020
C                                                         COM03030
C WRITE *END COM03040
C                                                         COM03050
0011      WRITE (29,40) COM03060
0012      40 FORMAT ('*END') COM03070
C                                                         COM03080
C WRITE BEGINNING AND ENDING ADDRESSES COM03090
C                                                         COM03100
C                                                         COM03110
0013      WRITE (29,50) NOTE1, (IGRIOR(J),IGRIDN(J),J=1,5) COM03120
0014      50 FORMAT (4A4,5(I4,1X,I4,2X)) COM03130
0015      DO 200 II=1,NUDATE COM03140
0016      WRITE (29,60) (IUDATE(J,II),J=1,4) COM03150
0017      60 FORMAT (4A4) COM03160
0018      200 CONTINUE COM03170
0019      RETURN COM03180
0020      END COM03190

```


FORTRAN IV 6 LEVEL 21
FILE COMPARE

COMPLA

DATE = 8/15/57

14/40/57

PAGE 0002

PIPDUE / LARS 3031

SYMBOL NOACQ CEGM	LOCATION 0 6R	SYMBOL ENSOIL DATE	COMMON BLOCK / MISC LOCATION 4C	SYMBOL IACQNT IGRIDR	/ MAP SIZE LOCATION 1C 7C	AR	SYMBOL AT IGRIDR	LOCATION 4C 90	SYMBOL NMFILE NOPSES	LOCATION 20 44
SYMBOL NOTE NOTE1	LOCATION 0 4ED4	SYMBOL NUMRL NIIDATE	COMMON BLOCK / INFO LOCATION 20 4FF4	SYMBOL IUDATE	/ MAP SIZE LOCATION 24	4FEM	SYMBOL LRIDAT	LOCATION C4	SYMBOL LSTTOT	LOCATION 4ED0
SYMBOL LIST	LOCATION 0	SYMBOL NODOTS	COMMON BLOCK / LIST LOCATION 4FAC	SYMBOL NOCLS	/ MAP SIZE LOCATION 4E10	4FRC	SYMBOL ISMRLS	LOCATION 4F14	SYMBOL	LOCATION
SYMBOL TRCON	LOCATION RC	SYMBOL	SUPPROGRAMS CALLED LOCATION	SYMBOL	LOCATION		SYMBOL	LOCATION	SYMBOL	LOCATION
SYMBOL I	LOCATION C0	SYMBOL I	SCALAR MAP LOCATION C4	SYMBOL K	LOCATION CH		SYMBOL II	LOCATION CC	SYMBOL	LOCATION
SYMBOL 20	LOCATION D0	SYMBOL 30	FORMAT STATEMENT MAP LOCATION DA	SYMBOL 40	LOCATION E0		SYMBOL 50	LOCATION EH	SYMBOL 60	LOCATION F9

OPTIONS IN EFFECT ID.FRCNIC.SOURCE.NOLIST.DECK.NOLOAD.MAP
 OPTIONS IN EFFECT NAME = COMPLA * LINECNT = 75
 STATISTICS SOURCE STATEMENTS = 20 PROGRAM SIZE = 816
 STATISTICS NO DIAGNOSTICS GENERATED

SUBROUTINE HEADIR

~~~~~

PURPOSE: WRITE REPORT HEADING

\*\*\*\*\* INPUT \*\*\*\*\*

DATE (4) DATE REPORT WRITTEN

| DATE (4)   | DATE OF FIRST ENTRY |
|------------|---------------------|
| IACONT (6) | ACQUISITION DATES   |

| PROJECT (A) | REGISTRATION |
|-------------|--------------|
| SEGMENT     | SEGMENT DATE |

LARFL                      GROUP LARFL

\*\*\*\*\* OUTPUT \*\*\*\*\*

REPORT HEADING WRITTEN

0002

COMMON /MISC/ NOACO, LNSOIL(6), IACONT(2,6), AI(5), NMFILE(2),  
1 SEGV,DATE(4),IGRIDR(5),IGRIDN(5),NOPGES

C

०००३

WRITF (6.190)

00004

```
100 FORMAT (1H1, 62X, 'TABLE IN', //, 63X, 'SUMMARY', //)
```

C

WRITE SEGMENT NUMBER AND DATE GENERATED

0005

```
150 WRITE (6,200) SFGM,DATE
```

0006

```

150 WRITE (6,200) SFRM=,DATE
200 FORMAT (43X,'SFRM = ',A4,' DATE GENERATED = ',A4)

```

5

WRITE ACQUISITION DATES

0007

```
WRITE (6,300) (J,(TACQNT(I,J), I=1,2), J=1,NOACQ)
```

0000

```
300  FORMAT (1/43X,'ACQUISITION ',I1,' = ',2A4)
```

0000A  
00009

## FINANCIAL RETURN

0010

FND

[illegible]

FORTAN IV G LEVEL 21  
FILE COMPARE

HEADIR

DATE = 80157

14/40/57

PAGE 0002

PURQUE / LARS 3031

| SYMBOL           | LOCATION       | COMMON BLOCK / MISC | SYMBOL                                 | LOCATION         | MAP            | SIZE | SYMBOL       | LOCATION | SYMBOL           | LOCATION | SYMBOL | LOCATION |
|------------------|----------------|---------------------|----------------------------------------|------------------|----------------|------|--------------|----------|------------------|----------|--------|----------|
| NOACO<br>SEGM    | 0<br>6A        | INSOIL<br>DATE      | 4<br>4C                                | TACONT<br>IGNIDR | 1C<br>7C       | AB   | AI<br>IGNIDN | 4C<br>90 | NMFILE<br>NOMGES | 20<br>A4 |        |          |
| SYMBOL<br>TACOMM | LOCATION<br>9C | SYMBOL              | SUPPROGRAMS CALLED<br>LOCATION         | SYMBOL           | LOCATION       |      | SYMBOL       | LOCATION | SYMBOL           | LOCATION |        |          |
| SYMBOL<br>J      | LOCATION<br>A0 | SYMBOL              | SCALAR MAP<br>LOCATION<br>A4           | SYMBOL           | LOCATION       |      | SYMBOL       | LOCATION | SYMBOL           | LOCATION |        |          |
| SYMBOL<br>100    | LOCATION<br>AA | SYMBOL              | FORMAT STATEMENT MAP<br>LOCATION<br>CA | SYMBOL           | LOCATION<br>F3 |      | SYMBOL       | LOCATION | SYMBOL           | LOCATION |        |          |

\*OPTIONS IN EFFECT\* ID.FRCOTC.SOURCE.NOLIST.DECK.NOLOAD.MAP  
 \*OPTIONS IN EFFECT\* NAME = HEADIR \* LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 10.PROGRAM SIZE = 576  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED

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FILE COMPARE

PIRNUF / LABS 3031

```

0001      SUBROUTINE HEADIT
C          PURPOSE:  WRITE REPORT HEADING
C
C          *****  INPUT  *****
C          DATE(4)      DATE REPORT WRITTEN
C          IACQNT(4)     ACQUISITION DATES
C          SEG#         SEGMENT DATE
C          LAB#         GROUP LABEL
C          *****  OUTPUT  *****
C          REPORT HEADING WRITTEN
C
0002      COMMON /MISC/ NOACQ, LNSOIL(6), IACQNT(2,6), AT(5), NWFILE(2),
1 SEG# DATE(4), IGRID(5), IGRIDN(5), NOPGES
C
0003      WRITE (6,100)
0004      100 FORMAT (141, 61X, 'TABLE II', //, 61X, 'DOT CHANGES')
C
0005      WRITE (6,110)
0006      110 FORMAT (/,59X, 'ORDERED BY GRID', //)
C
0007      WRITE SEGMENT NUMBER AND DATE GENERATED
0008      150 WRITE (6,200) SEG# DATE
0009      200 FORMAT (43X, 'SITE = ', A4, ' DATE GENERATED = ', A4)
C
0010      WRITE ACQUISITION DATES
0011      300 WRITE (6,300) (I, (IACQNT(I,J), I=1,2), J=1, NOACQ)
0012      300 FORMAT (/,43X, 'ACQUISITION ', I1, ' = ', A4)
C          RETURN
C          END

```

```

COM03400
COM03410
COM03420
COM03430
COM03440
COM03450
COM03460
COM03470
COM03480
COM03490
COM03500
COM03510
COM03520
COM03530
COM03540
COM03550
COM03560
COM03570
COM03580
COM03590
COM03600
COM03610
COM03620
COM03630
COM03640
COM03650
COM03660
COM03670
COM03680
COM03690
COM03700
COM03710
COM03720
COM03730
COM03740
COM03750
COM03760
COM03770
COM03780
COM03790
COM03800
COM03810
COM03820
COM03830
COM03840
COM03850
COM03860
COM03870
COM03880
COM03890
COM03900

```

FORTRAN IV G LEVEL 21  
FILE COMPARE

HEADII

DATE = 80157

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PURHJE / LARS 3031

| SYMBOL           | LOCATION       | COMMON BLOCK / MISC | SYMBOL   | LOCATION         | MAP SIZE | AR | SYMBOL       | LOCATION | SYMBOL           | LOCATION |
|------------------|----------------|---------------------|----------|------------------|----------|----|--------------|----------|------------------|----------|
| NOACD<br>SEGM    | 0<br>6A        | LN SOIL<br>DATE     | 4<br>6C  | IACDIT<br>IGRIDR | 1C<br>7C |    | AI<br>IGRIDN | 4C<br>90 | NMFILE<br>NOPGES | 60<br>A4 |
| SYMBOL<br>TRCOMB | LOCATION<br>9C | SYMBOL              | LOCATION | SYMBOL           | LOCATION |    | SYMBOL       | LOCATION | SYMBOL           | LOCATION |
| SYMBOL<br>.1     | LOCATION<br>A0 | SYMBOL              | LOCATION | SYMBOL           | LOCATION |    | SYMBOL       | LOCATION | SYMBOL           | LOCATION |
| SYMBOL<br>100    | LOCATION<br>AA | SYMBOL              | LOCATION | SYMBOL           | LOCATION |    | SYMBOL       | LOCATION | SYMBOL           | LOCATION |

\*OPTIONS IN EFFECT\* IO.FRCDIC.SOURCE.NOLIST.DECK.NOLoad.MAP  
 \*OPTIONS IN EFFECT\* NAME = HEADII . LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 12.PROGRAM SIZE = 620  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED  
 \*STATISTICS\* NO DIAGNOSTICS THIS STEP

FTIF AFRMIN

PURDUE / LARS 3031

```

0001      SUBROUTINE AFRMIN (INPUT,NOCHAR,IOUPT)
      C
      C PURPOSE: CONVERTS ALPHA CHARACTERS FROM INTEGER INPUT
      C
      LOGICAL*1 LOC1(4), ICHAR1(4)
      EQUIVALENCE (ICHAR1(1), ICHAR4), (LOC1(1), LOC4)
      DIMENSION ITDOT(4)
      DATA IRLNK/1, 1/
      DATA IZERO/0, 0/
      DATA ICNT/0/

      C COUNT UP DOTS FOR PRINTING
      C
      C IF (NOCHAR.EQ.2) ICNT = ICNT + 1
      C
      C BLANK DOTS
      C
      IOUPT = IRLNK
      IF (INPUT.EQ. IRLNK) GO TO 350
      CALL RNIAA1(ITDOT,NOCHAR,INPUT)
      IF (ITDOT(1).NE. IZERO) GO TO 250
      ITDOT(1) = IRLNK
      IF (ITDOT(2).NE. IZERO) GO TO 250
      ITDOT(2) = IRLNK
      IF (ITDOT(3).NE. IZERO) GO TO 250
      ITDOT(3) = IRLNK
      250 CONTINUE

      C LEADING ZEROS CONVERTED TO BLANKS. MOVE TO FINAL LOCATION
      DO 300 I = 1,4
      ICHAR4 = ITDOT(I)
      LOC1(I) = ICHAR1(I)
      300 CONTINUE
      IOUPT = LOC4
      350 CONTINUE
      RETURN
      END

```

```

AFR00010
AFR00020
AFR00030
AFR00040
AFR00050
AFR00060
AFR00070
AFR00080
AFR00090
AFR00100
AFR00110
AFR00120
AFR00130
AFR00140
AFR00150
AFR00160
AFR00170
AFR00180
AFR00190
AFR00200
AFR00210
AFR00220
AFR00230
AFR00240
AFR00250
AFR00260
AFR00270
AFR00280
AFR00290
AFR00300
AFR00310
AFR00320
AFR00330
AFR00340
AFR00350
AFR00360
AFR00370

```

FORTRAN IV G LEVEL 21  
FILE AFRMIN

AFRMIN

DATE = 80157

14/32/37

PAGE 0002

PUPNIE / LARS 3031

| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
|--------|----------|--------|----------|--------|----------|--------|----------|
| DMT4AT | RA       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| ICHART | CA       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| IRANK  | DA       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| INPUT  | EA       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| ITOOT  | EC       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |

\*OPTIONS IN EFFECT\* ID,ERCOIC,SOURCE,NOLIST,DECK,NOLoad,MAP  
 \*OPTIONS IN EFFECT\* NAME = AFRMIN \* LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 26,PROGRAM SIZE = 638  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED

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FILE CALDOT

PURPOSE / LARS 3031

```

0001      SUBROUTINE CALDOT (LINE,ISAMPL,IMDOT)
C
C  PURPOSE:  CALCULATES THE DOT NUMBER FROM THE LINE AND ISAMPL
C
0002      LOGICAL*4 LOC1(4), ICHAR1(4)
0003      EQUIVALENCE (ICHAR1(1),ICHAR4), (LOC1(1),LOC4)
0004      DIMENSION ITDOT(4)
0005      DATA IRLNK/' '/
0006      DATA IZERO/'0'/
0007      DATA ICNT/0/
C
C  COUNT UP DOTS FOR PRINTING
C
0008      ICNT = ICNT + 1
C
C  BLANK DOTS
C
0009      IMDOT = IRLNK
0010      IF (MOD(LINE,10) .NE. 0) GO TO 350
0011      IF (MOD(ISAMPL,10) .NE. 0) GO TO 350
0012      IDOTCL = (LINE/10 - 1)*10 + ISAMPL/10
0013      CALL BN14A1(ITDOT,4,IDOTCL)
0014      IF (ITDOT(1) .NE. IZERO) GO TO 250
0015      ITDOT(1) = IRLNK
0016      IF (ITDOT(2) .NE. IZERO) GO TO 250
0017      ITDOT(2) = IRLNK
0018      IF (ITDOT(3) .NE. IZERO) GO TO 250
0019      ITDOT(3) = IRLNK
0020      250 CONTINUE
C
C  LEADING ZEROS CONVERTED TO BLANKS, MOVE TO FINAL LOCATION
C
0021      DO 300 I = 1,4
0022      ICHAR4 = ITDOT(I)
0023      LOC1(I) = ICHAR1(I)
0024      300 CONTINUE
0025      IMDOT = LOC4
0026      350 CONTINUE
C
C  IF (ICNT .LE. 30) WRITE (6,999) (ITDOT(I),I=1,4),IMDOT,LOC1
C  999 FORMAT (' ITDOT = ',4A4,' IMDOT ',A4,' LOC ',A4A4)
0027      RETURN
0028      END

```

```

CAL00010
CAL00020
CAL00030
CAL00040
CAL00050
CAL00060
CAL00070
CAL00080
CAL00090
CAL00100
CAL00110
CAL00120
CAL00130
CAL00140
CAL00150
CAL00160
CAL00170
CAL00180
CAL00190
CAL00200
CAL00210
CAL00220
CAL00230
CAL00240
CAL00250
CAL00260
CAL00270
CAL00280
CAL00290
CAL00300
CAL00310
CAL00320
CAL00330
CAL00340
CAL00350
CAL00360
CAL00370
CAL00380
CAL00390
CAL00400

```



FORTRAN IV G LEVEL 21  
FILE CALDOT

CALDOT

DATE = MAR 57

14/31/52

PAGE 0002

PURQUE / LARS 3031

| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
|--------|----------|--------|----------|--------|----------|--------|----------|
| INT4A1 | RR       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| ICMAP1 | DR       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| IRANK  | FR       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| ICAMP1 | F4       | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
| ITDOT  | 100      | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |

\*OPTIONS IN EFFECT\* ID.FRCOIC.SOURCE.NOLIST.DECK.NOLoad.MAP  
 \*OPTIONS IN EFFECT\* NAME = CALDOT \* LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 28, PROGRAM SIZE = 732  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED

FTIF AFRMTN

PURDUE / LARS 3031

```

0001      SUBROUTINE AFRMTN (INPUT,NOCHAR,IOUTPT)
      C
      C      PURPOSE: CONVERTS ALPHA CHARACTERS FROM INTEGER INPUT
      C
      LOGICAL*1 LOC1(4), ICHAR1(4)
      EQUIVALENCE (ICHAR1(1), ICHAR4), (LOC1(1), LOC4)
      DIMENSION ITDOT(4)
      DATA IRLNK/1,1/
      DATA IZERO/10,1/
      DATA ICNT/0/

      C
      C      COUNT UP DOTS FOR PRINTING
      C
      IF (NOCHAR.EQ.2) ICNT = ICNT + 1

      C
      C      BLANK DOTS
      C
      IOUTPT = IRLNK
      IF (INPUT.EQ. IRLNK) GO TO 350
      CALL RMT4A(ITDOT,NOCHAR,INPUT)
      IF (ITDOT(1).NE. IZERO) GO TO 250
      ITDOT(1) = IRLNK
      IF (ITDOT(2).NE. IZERO) GO TO 250
      ITDOT(2) = IRLNK
      IF (ITDOT(3).NE. IZERO) GO TO 250
      ITDOT(3) = IRLNK
      250 CONTINUE

      C
      C      LEADING ZEROS CONVERTED TO BLANKS. MOVE TO FINAL LOCATION
      DO 300 I = 1,4
      ICHAR4 = ITDOT(I)
      LOC1(I) = ICHAR1(I)
      300 CONTINUE
      IOUTPT = LOC4
      350 CONTINUE
      RETURN
      END

```

```

AFR00010
AFR00020
AFR00030
AFR00040
AFR00050
AFR00060
AFR00070
AFR00080
AFR00090
AFR00100
AFR00110
AFR00120
AFR00130
AFR00140
AFR00150
AFR00160
AFR00170
AFR00180
AFR00190
AFR00200
AFR00210
AFR00220
AFR00230
AFR00240
AFR00250
AFR00260
AFR00270
AFR00280
AFR00290
AFR00300
AFR00310
AFR00320
AFR00330
AFR00340
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AFR00370
AFR00380
AFR00390
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AFR00600
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AFR00680
AFR00690
AFR00700
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AFR00900
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AFR00920
AFR00930
AFR00940
AFR00950
AFR00960
AFR00970
AFR00980
AFR00990

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OF POOR QUALITY

FORTRAN IV G LEVEL 21  
FILE AFRMIN

AFRMIN

DATE = 80157

14/32/37

PAGE 0002

PURDUE / LARS 3031

| SYMBOL               |          | SUBPROGRAMS CALLED |          | SYMBOL   |          | SYMBOL   |          | SYMBOL   |          |
|----------------------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|
| LOCATION             | LOCATION | LOCATION           | LOCATION | LOCATION | LOCATION | LOCATION | LOCATION | LOCATION | LOCATION |
| QNT4A1               | RA       |                    |          |          |          |          |          |          |          |
| EQUIVALENCE DATA MAP |          |                    |          |          |          |          |          |          |          |
| ICHAR1               | CA       | ICHAR4             | CA       | LOC1     | CC       | LOC4     | CC       |          |          |
| SCALAR MAP           |          |                    |          |          |          |          |          |          |          |
| IRINK                | DA       | IZERO              | DA       | ICNT     | DA       | NOCHAR   | DC       | IOUTPT   | EA       |
| INPIIT               | FA       |                    | FB       |          |          |          |          |          |          |
| ARRAY MAP            |          |                    |          |          |          |          |          |          |          |
| ITOOT                | FC       |                    |          |          |          |          |          |          |          |

\*OPTIONS IN EFFECT\* ID,ERCDC,SOURCE,NOLIST,DECK,NOLoad,MAP  
 \*OPTIONS IN EFFECT\* NAME = AFRMIN \* LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 26,PROGRAM SIZE = 638  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED

FILE PISRT

PURDUE / LARS 3031

```

0001      SUBROUTINE PISRT(ITEMP,ISRTWH)
C
C      PURPOSE:  SORT ONE SET OF LINES NUMBERS, SAMPLES, GREENNESS
C                AND BRIGHTNESS VALUES
C
0002      COMMON /LIST/ LIST(999,5), NODOTS, NOCLS, ISMRLS(30)
C
0003      COMMON/PUFFER/IDATA(3200),LINEFNO,KOLUMN
C
0004      COMMON/PLOT/TITLE(20),XLABEL(20),YLABEL(5),NPOTNT,X(1000),Y(1000)
C
0005      COMMON/RADIAN/NOCHAN,IGREEN,IBRIT, IDOTRD(999,16)
C
0006      COMMON/INFO/NOTE(8),NUMLRL,IUDATE(4,10),LRLDAT(999,5),LSTTOT
C      1,NOTE1(4),NIUDATE
C
0007      DIMENSION ITEM(999,6),KEEP(6)
C
C      SORT VALUES ON SPECIFIED SORT
C      LAST = LSTTOT - 1
C      DO 200 I = 1,LAST
C      LOW = I
C      NEXT = LOW + 1
C      DO 100 IHIGH = NEXT, LSTTOT
C      IF (ITEMP(LOW,ISRTWH) .LT. ITEM(IIHIGH,ISRTWH)) GO TO 190
C
C      SWAP VALUES
C      SAVE OLD TOP ELEMENTS
C      DO 110 L = 1,6
C      110  KEEP(L) = ITEM(IIHIGH,L)
C
C      PUSH LOWER ENTRIES IN STACK UP 1, START AT TOP OF STACK
C      ITOP = IHIGH - 1
C      DO 140 LLL = I,ITOP
C      LITTLE = ITOP - LLL + 1
C      IRI = LITTLE + 1
C      MOVE 6 ELEMENTS
C      DO 130 L = 1,6
C      130  ITEM(IRI,L) = ITEM(LITTLE,L)
C
C      140  CONTINUE
C
C      MOVE OLD TOP ELEMENT TO BOTTOM
C      DO 160 L = 1,6
C      160  ITEM(LOW,L) = KEEP(L)
C
C      190  CONTINUE
C
C      200  CONTINUE
C
0027      RETURN
0028      END

```

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PIS00010
PIS00020
PIS00030
PIS00040
PIS00050
PIS00060
PIS00070
PIS00080
PIS00090
PIS00100
PIS00110
PIS00120
PIS00130
PIS00140
PIS00150
PIS00160
PIS00170
PIS00180
PIS00190
PIS00200
PIS00210
PIS00220
PIS00230
PIS00240
PIS00250
PIS00260
PIS00270
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PIS00300
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PIS00450
PIS00460
PIS00470
PIS00480
PIS00490
PIS00500
PIS00510
PIS00520
PIS00530
PIS00540
PIS00550
PIS00560

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FORTRAN IV G LEVEL 21  
FILE PISRT

PISRT

DATE = 8/15/57

14/47/??

PAGE 0002

PURDUE / LARS 3031

|                                  |                             |                             |                                        |         |       |                          |      |                        |                      |                           |                      |
|----------------------------------|-----------------------------|-----------------------------|----------------------------------------|---------|-------|--------------------------|------|------------------------|----------------------|---------------------------|----------------------|
| SYMBOL<br>LIST                   | LOCATION<br>0               | SYMBOL<br>NODOTS            | COMMON BLOCK<br>LOCATION<br>4E0C       | /LIST   | / MAP | SIZE<br>LOCATION<br>4E10 | 4FRC | SYMBOL<br>TSMRLS       | LOCATION<br>4E14     | SYMBOL                    | LOCATION             |
| SYMBOL<br>IOATA                  | LOCATION<br>0               | SYMBOL<br>LINEFN            | COMMON BLOCK<br>LOCATION<br>3200       | /BUFFER | / MAP | SIZE<br>LOCATION<br>3204 | 3208 | SYMBOL                 | LOCATION             | SYMBOL                    | LOCATION             |
| SYMBOL<br>TITLE<br>Y             | LOCATION<br>0<br>1058       | SYMBOL<br>XLABEL            | COMMON BLOCK<br>LOCATION<br>50         | /PLOT   | / MAP | SIZE<br>LOCATION<br>A0   | 1058 | SYMBOL<br>NPOINT       | LOCATION<br>R4       | SYMBOL<br>X               | LOCATION<br>BR       |
| SYMBOL<br>NOCHAN                 | LOCATION<br>0               | SYMBOL<br>IGREFN            | COMMON BLOCK<br>LOCATION<br>4          | /RADIAN | / MAP | SIZE<br>LOCATION<br>3    | F9CC | SYMBOL<br>IDOTRD       | LOCATION<br>C        | SYMBOL                    | LOCATION             |
| SYMBOL<br>NOTE<br>NOTE1          | LOCATION<br>0<br>4ED4       | SYMBOL<br>NUMBLR<br>NUMDATE | COMMON BLOCK<br>LOCATION<br>20<br>4FF4 | /INFO   | / MAP | SIZE<br>LOCATION<br>24   | 4FF8 | SYMBOL<br>LHLDAT       | LOCATION<br>C4       | SYMBOL<br>LSTTOT          | LOCATION<br>4E00     |
| SYMBOL<br>IACT<br>ISPTWH<br>IRIG | LOCATION<br>08<br>EC<br>100 | SYMBOL<br>I<br>L            | SCALAR MAP<br>LOCATION<br>DC<br>F0     |         |       | LOCATION<br>F0<br>F4     |      | SYMBOL<br>NEXT<br>LLLL | LOCATION<br>F4<br>FR | SYMBOL<br>THIGH<br>LITTLE | LOCATION<br>EH<br>FC |
| SYMBOL<br>TTEMP                  | LOCATION<br>104             | SYMBOL<br>KFFP              | ARRAY MAP<br>LOCATION<br>108           |         |       | LOCATION                 |      | SYMBOL                 | LOCATION             | SYMBOL                    | LOCATION             |

\*OPTIONS IN EFFECT\* ID.FRCDC.SOURCE.NOLIST.DECK.NOLOAD.MAP  
 \*OPTIONS IN EFFECT\* NAME = PISRT \* LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 28 PROGRAM SIZE = 920  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED

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FILE SETPID

PURDUE / LARS 3031

```

0001      SUBROUTINE SETPID                                SET00010
0002      IMPLICIT INTEGER (A-X)                          SET00020
C
C      PURPOSE: READ AND ANALYZE CARDS DESCRIBING THE FOLLOWING-- SET00030
C
C      DOTS      NUMBER DOTS TO SELECT IN PROPORTION TO CLUSTER SIZES SET00040
C      CHANNELS  SERIES OF NUMBERS DESCRIBING CHANNELS TO BE USED SET00050
C                  (GRAYTAB, PLOTGR, LISTDOT, GREENREP) SET00060
C      *** ARRAYS, 1 FOR EACH GREEN/BRIGHT PAIR SET00070
C
C      SOIL      SERIES OF NUMBERS DESCRIBING SOIL LINES SET00080
C      ACQI DATES SERIES OF NUMBERS DESCRIBING ACQUISITION DATES SET00090
C                  COMMON/GRUOPS/KTLARP,LARSP(30),KTLARF,LARSF(30) SET00100
C      *** COMMON BLOCK TO DESCRIBE AT SELECTED LABELS AND LABELS ON FILE SET00110
C      SELECT    SELECTED LABEL IDENTIFICATION IN FORM NAME1, NAME2, NAME3 SET00120
C                  (PLOTGR, LISTDOT, GREENREP.) SET00130
C      *** DATA TO BE USED IN REPORT HEADINGS ONLY SET00140
C      COMMON BLOCK /HEADING/ SEGM, DATE(3), COUNT(17) SET00150
C      SEGMENT   SEGMENT NUMBER AS ENTERED IN COLS 11-19 SET00160
C                  (HEADING DATA ONLY IN PLOTGR, LISTDOT, GREENREP, ETC.) SET00170
C      DATE      DATE AS ENTERED IN COLS 11-30 SET00180
C                  (HEADING DATA ONLY IN PLOTGR, LISTDOT, GREENREP, ETC.) SET00190
C      TACQNT    ACQUISITION DATES AS ENTERED IN COLS 11-40 SET00200
C      AT        AT NAME AS ENTERED IN COLS 11-30 SET00210
C      *** NEW FILE NAME FOR LABELED LIST FILE *** SET00220
C      NMFILE    FIRST EIGHT NONBLANK CHARACTERS IN COLS 11-40 SET00230
C
C      COMMON/RADIAN/DOCHAN,IGREEN,IRBIT,IODTRD(999,16) SET00240
C      ***WARNING THIS IS ONLY PART OF THE RADIAN COMMON BLOCK SET00250
C      COMMON/RECHIR/MTOTAL,NDDOTS SET00260
C      COMMON /INFORM/HEAD(42), MAPTAB, DATAPF, SAVTAP, MAXFET, SET00270
C      1          PAGES17, TAPCHK, TRNSYM, TSTSYM, SET00280
C      2          DIPSYM, THRSYM, MAXDIV, MINDIV, SPLMAX, SET00290
C      3          SERIAL, TAPFSV, FILESV, SET00300
C      4          MAXCLS, NOCLS2, MAXFLD, NOFLD2, NOFLD3, SET00310
C      5          NOTREN, NOFFAT, NOFFT2, NOFFT4, VARS17, SET00320
C      6          VARS22, VARS24, XS17, NOSPEC, NOHIST, SET00330
C      7          NOGRP, DIVS17, KEPLV, PRTLFV, YSIZ, SET00340
C      8          XHIGH, XLOW, SPCRAS, NOCLS3, PCTS7, SET00350
C      9          QTRLOCK(30),FFTVFC(30),FFTVFC2(30), HISVEC(30),INVERT(30),RESTVC(30) SET00360
C      10         DIMENSION ACARD(20), CARD(40), ITEMP(20) SET00370
C
C      COMMON/GRUOPS/KTLARP,LARSP(30),KTLARF,LARSF(30) SET00380
C
C      COMMON /MISC/ NOACO, LNSOIL(6), TACQNT(2,6), AT(5), NMFILE(2), SET00390
C      1          SEGM, DATE(4), IGRIDR(5), IGRIDN(5),NOPRES,NOLNES,KUPADQ,LORU SET00400
C
C      DATA KL/'L','K','H','I','J','I','J','I','J','I','J','I','J','I','J' SET00410
C      DIMENSION INVEC(12) SET00420
C
C      DATA INVEC/'DOTS','CHAN','SOIL','ACQI','SELE','DATE','SEGM','COMM' SET00430
C      1, 'AT', 'FILE', 'LARP','END' SET00440
C
C      ***** INITIALIZE VARIABLES SET FROM CC FILE ***** SET00450
C      DO 1 I = 1,6 SET00460
C      LNSOIL(I) = 0 SET00470
C      DO 1 J = 1,2 SET00480
C      TACQNT(J,I) = TRIANK SET00490
C      CONTINUE SET00500
C
C      DO 2 I = 1,5 SET00510
C      AT(I) = XRLANK SET00520
C      IGRIDR(I) = 0 SET00530
C      IGRIDN(I) = 0 SET00540
C      CONTINUE SET00550
C
C      DO 3 I = 1,4 SET00560
C      DATE(I) = XRLANK SET00570

```

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FILE SETPID

PURPOSE / LARS 3031

```

0024      3      CONTINUE
0025      C
0026      NOFFAT=0
0026      NOACO = 0
0027      SFGM = XRLANK
0028      NOPGFS = 1
0029      NMFILE(1) = IRLANK
0030      NMFILE(2) = IRLANK
0031      C ***** WRITE HEADING FOR INPUT SUMMARY *****
0032      WRITE(A,630)
0032      A30 FORMAT(/// 'INPUT SUMMARY'///)
0033      C *** READ CARD, PRINT CARD ON SUMMARY, PLACE CARD IN PREAD BUFFER ***
0033      PRUNIT=30
0034      C READ CARD
0034      4 READ(2),1000) (ACARD(I),I=1,20)
0035      1000 FORMAT(20A4)
0036      C PLACE CARD IN PREAD BUFFER
0036      REWIND PRUNIT
0037      WRITE(PRUNIT,1000) (ACARD(I),I=1,20)
0038      REWIND PRUNIT
0039      C WRITE INPUT LINE ON LISTING
0039      WRITE (A,1001) (ACARD(I),I=1,20)
0040      1001 FORMAT (1X,20A4)
0041      C ***** ANALYZE CARD *****
0041      C SET NUMBER OF VALID CARD TYPES
0041      CNUM = 12
0042      C DETERMINE CARD TYPE
0042      DO 5 I=1,CNUM
0043      K = ACARD(I)
0044      IF(K.EQ.INVEC(I)) GO TO (10,20,30,40,50,60,70,80,90,100,110,120),I
0045      5      CONTINUE
0046      C INVALID CARD TYPE
0046      WRITE(A,490)
0047      490 FORMAT(' INVALID INPUT CARD--IGNORED'//)
0048      GO TO 4
0049      C ***** VALID CARD TYPES, PROCESS DATA *****
0049      C DOTS CARD
0049      10 READ(PRUNIT,1002) CARD
0050      1002 FORMAT (90A1)
0051      COUNT = NUMR(CARD,NODOTS)
0052      GO TO 4
0053      C CHANNEL CARD
0053      20 READ(PRUNIT,1002) CARD
0054      NOFFAT = NUMR(CARD, FETVFC)
0055      NOCHAN = NOFFAT
0056      NOACO = NOFFAT/2
0057      VARSIZ=(NOFFAT*(NOFFAT+1))/2
0058      GO TO 4
0059      C SOIL LINE CARD
0059      30 READ (PRUNIT, 1002) CARD
0060      NOSOIL = NUMR (CARD, LNSOIL)
0061      GO TO 4
0062      C ACQUISITION DATE CARD
0062      40 READ (PRUNIT, 1002) CARD
0063      NOACOD = MOVSYM (CARD, ITMP, NAME)
0064      NDFX = 1
0065      DO 44 I = 1,12,2
0066      IACOD(I,NDFX) = ITMP(I)
0067      NFXT = I + 1
0068      IACOD(2,NDFX) = ITMP(NFXT)
0069      NDFX = NDFX + 1

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SET00720
SET00730
SET00740
SET00750
SET00760
SET00770
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SET00800
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SET00990
SET01000
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SET01210
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SET01360
SET01370
SET01380
SET01390
SET01400
SET01410
SET01420

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PUDDIE / LARS 3031

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FILE SETPID

PURDUE / LARS 3031

| SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION | SYMBOL | LOCATION |
|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|
| NOCHAN | 0        | IGREEN | 4        | MAPIT  | 8        | IDOTRO | C        |        |          |
| MTOTAL | 0        | NOODTS | 4        |        |          |        |          |        |          |
| HEAD   | 0        | MAPTAP | AP       | DATAPE | AC       | SAVTAP | R0       | MAXFET | B4       |
| PACSTZ | RR       | TAPCHK | RC       | TRNSYM | C0       | TSTSYM | C4       | DUPSYM | CR       |
| THDSYM | CC       | MAXDIV | 00       | MINDIV | D4       | SPLMAX | 0R       | SERIAL | 0C       |
| TAPFSV | F0       | FTIFSV | F4       | MAXCLS | F8       | NOCLS2 | EC       | MAXFLO | F0       |
| NOFLD2 | F4       | NOFLD3 | FR       | NOTREF | FC       | NOFEAT | 100      | NOFET2 | 104      |
| NOFFT4 | 10R      | VAP517 | 10C      | VARSZ2 | 110      | VARS74 | 114      | XSI7   | 11R      |
| NOSEPC | 11C      | NOHIST | 120      | NOGRP  | 124      | DIVSIZ | 12R      | KEEPLV | 12C      |
| PDTELV | 130      | YS17   | 134      | XMGH   | 13R      | XLOW   | 13C      | SPCJAS | 140      |
| NOCLS3 | 144      | PCTS7  | 14R      | IRLOCK | 14C      | FETVEC | 1C4      | FETVC2 | 23C      |
| HTSVFC | 2R4      | INVERT | 32C      | RFSTVC | 3A4      |        |          |        |          |
| KT1ARR | 0        | LARSR  | 4        | KT1ARF | 7C       | LARSF  | R0       |        |          |
| NOACO  | 0        | INSOIL | 4        | IACONT | 1C       | AI     | 4C       | NMFILE | 60       |
| CFGM   | 6R       | DATF   | AC       | IGRIDR | 7C       | IGRIDN | 90       | NOPGES | A4       |
| NOLNES | AR       | KIRADQ | AC       | LORU   | R0       |        |          |        |          |
| TRCONM | 154      | NUMR   | 15R      | MOVSYM | 15C      |        |          |        |          |
| KL     | 19C      | KIJ    | 1A0      | IBLANK | 1A4      | XRLANK | 1AR      | KONMA  | 1AC      |
| T      | 1R0      | J      | 1R4      | RRUNIT | 1RR      | CNUM   | 19C      | K      | 1E0      |
| KOINT  | 1C4      | NOSOIL | 1CR      | NOACOD | 1CC      | NAME   | 100      | NDEX   | 104      |
| NEXT   | 10R      | NSOIL  | 10C      | NACOD  | 1E0      |        |          |        |          |
| ACARD  | 1F4      | CARD   | 234      | ITEMP  | 374      | INVEC  | 3C4      |        |          |
| 670    | 3F4      | 1000   | 408      | 1001   | 410      | 490    | 41R      | 1002   | 439      |
| 1003   | 43F      | 116    | 447      | 191    | 4A0      | 192    | 406      |        |          |

\*OPTIONS IN EFFECT\* ID,ERCOIC,SOURCE,NOLIST,DECK,NOLOAD,MAP  
 \*OPTIONS IN EFFECT\* NAME = SETPID, LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 10R,PROGRAM SIZE = 3112  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED

FTIF SETPID

PURDUE / LARS 3031

```

0001      FUNCTION NUMR (CARD, NUMVEC)
C
C   SIMPLIFIED VERSION OF NUMBER
C   MOVES NUMBERS FROM CARD TO ARRAY NUMVEC.
C   STORES COUNT OF NUMBERS IN NUMR
C
0002      IMPLICIT INTEGER (A-Z)
C
0003      DIMENSION CARD(1), NUMVEC(1)
0004      DATA BLANK/' ', COMMA/',',
0005      DATA MINUS /'-'/,
0006      DATA ZERO/'0'/, NINE/'9'/
C
C   ITRIG = SWITCH FOR NUMBER COLLECTED AND NOT STOPED
0007      ITRIG = 0
0008      INFG = 1
0009      NUM = 0
0010      NDEX = 0
C
0011      DO 40 COL=1,80
0012      IF (CARD(COL).EQ.MINUS) GO TO 40
0013      IF (CARD(COL).EQ.BLANK) GO TO 40
0014      IF (CARD(COL).EQ.COMMA) GO TO 50
0015      IF (CARD(COL).LT.ZERO.OR.CARD(COL).GT.NINE) GO TO 90
0016      CALL I4A1RN(CARD(COL),1,NWORD)
0017      NUM = 10 * NUM + NWORD
0018      ITRIG=1
0019      GO TO 40
C
C   MINUS SIGN
0020      40  INFG = -1
0021      GO TO 40
C
C   END OF NUMBER. INFG IS SET TO 1 OR -1
0022      50  NDEX = NDEX + 1
0023      NUMVEC(NDEX) = NUM * INFG
0024      INFG = 1
0025      ITRIG = 0
0026      NUM = 0
0027      60  CONTINUE
C
0028      90  IF (ITRIG.EQ.0) GO TO 100
0029      NDEX = NDEX + 1
0030      NUMVEC(NDEX) = NUM * INFG
C
0031      100 NUMR = NDEX
0032      RETURN
0033      END

```

```

SET02030
SET02040
SET02050
SET02060
SET02070
SET02080
SET02090
SET02100
SET02110
SET02120
SET02130
SET02140
SET02150
SET02160
SET02170
SET02180
SET02190
SET02200
SET02210
SET02220
SET02230
SET02240
SET02250
SET02260
SET02270
SET02280
SET02290
SET02300
SET02310
SET02320
SET02330
SET02340
SET02350
SET02360
SET02370
SET02380
SET02390
SET02400
SET02410
SET02420
SET02430
SET02440
SET02450
SET02460
SET02470
SET02480
SET02490
SET02500

```

FOOTRAN IV G LEVEL 21  
FILE SETPID

NUMH

DATE = R0157

14/48/14

PAGE 0002

PIPDIE / LARS 3031

| SYMBOL LOCATION     |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  |
|---------------------|--|-----------------|--|-----------------|--|-----------------|--|
| SYMBOL LOCATION 00  |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  |
| SYMBOL LOCATION F0  |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  |
| SYMBOL LOCATION F4  |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  |
| SYMBOL LOCATION F4  |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  |
| SYMBOL LOCATION 100 |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  |
| SYMBOL LOCATION 110 |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  | SYMBOL LOCATION |  |

\*OPTIONS IN EFFECT\* ID.FRCOIC.SOURCE.NOLIST.DECK.NOLOAD.MAP  
 \*OPTIONS IN EFFECT\* NAME = NUMH \* LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 33,PROGRAM SIZE = 786  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED

FILE SETP10

PURQUE / LARS 3031

```

0001      FUNCTION MOVSYM (CARD, ITEMP, NAME)
      C
      C PURPOSE: DECODE (1) CARD OF FORM SYMBOL1, SYMBOL2, ... SYMBOLN
      C              (2) CARD OF FORM SYMBOL = SYMBOL1, ... SYMBOLN
      C
0002      REAL*8 ITEMP(10), THOLDR
0003      LOGICAL*1 ICHAR(1), IHOLD(R)
0004      INTEGER*4 CARD(1)
0005      EQUIVALENCE (ICHA(1), ICHAR4), (IHOLD(1), IHOLDR)
      C
0006      DATA ICHAR4// '%', IBLANK// '%', IFQUAL// '%', ICOMMA// '%',
0007      NDEX = 0
0008      KOUNT = 0
      C
0009      DO 100 KOL = 1, 40
0010      ICHAR4 = CARD(KOL)
0011      IF (ICHA4.NE. IBLANK) GO TO 10
      C
0012      BLANK
0013      IF (KOL.EQ. 40 .AND. NDEX.NE. 0) GO TO 80
      GO TO 100
      C
0014      NOT BLANK
0015      IF (ICHA4.EQ. ICOMMA) GO TO 40
      IF (ICHA4.EQ. IFQUAL) GO TO 70
      C
0016      STORE CHARACTER IN WORD DESCRIBING SYMBOL, MAX OF 4 CHARACTERS
0017      NDEX = NDEX + 1
0018      IF (NDEX.GT. 4) GO TO 100
0019      IHOLD(NDEX) = ICHA2(1)
0020      IF (KOL.EQ. 40) GO TO 80
      GO TO 100
      C
0021      ***** THIS CODE NOT ACTUALLY USED--GROUP SYMBOL
0022      70 NAME = IHOLDR
0023      NDEX = 0
      GO TO 100
      C
0024      END OF SYMBOL
0025      80 KOUNT = KOUNT + 1
0026      ITEMP(KOUNT) = IHOLDR
      NDEX = 0
      C
0027      100 CONTINUE
      C
0028      MOVSYM = KOUNT
0029      RETURN
0030      END

```

```

SET02510
SET02520
SET02530
SET02540
SET02550
SET02560
SET02570
SET02580
SET02590
SET02600
SET02610
SET02620
SET02630
SET02640
SET02650
SET02660
SET02670
SET02680
SET02690
SET02700
SET02710
SET02720
SET02730
SET02740
SET02750
SET02760
SET02770
SET02780
SET02790
SET02800
SET02810
SET02820
SET02830
SET02840
SET02850
SET02860
SET02870
SET02880
SET02890
SET02900
SET02910
SET02920
SET02930
SET02940
SET02950
SET02960
SET02970
SET02980
SET02990

```

ORIGINAL PAGE IS  
OF POOR QUALITY

FORTRAN IV G LEVEL 21  
FILE SETPID

MOVSYM

DATE = 80157

14/48/14

PAGE 0012

PURPOSE / LARS 3031

| SYMBOL<br>TCHAR        | LOCATION<br>D0       | SYMBOL<br>TCHAR4         | EQUIVALENCE DATA<br>LOCATION<br>D0 | MAP<br>SYMBOL<br>THOLD | LOCATION<br>D0 | SYMBOL<br>THOLD | LOCATION<br>D0 | SYMBOL<br>MOVSYM | LOCATION<br>D0 |
|------------------------|----------------------|--------------------------|------------------------------------|------------------------|----------------|-----------------|----------------|------------------|----------------|
| SYMBOL<br>THANK<br>KOL | LOCATION<br>F4<br>F9 | SYMBOL<br>TEQUAL<br>NAME | SCALAR MAP<br>LOCATION<br>F9<br>FC | SYMBOL<br>TCONMA       | LOCATION<br>EC | SYMBOL<br>INDEX | LOCATION<br>F0 | SYMBOL<br>KOUNT  | LOCATION<br>F4 |
| SYMBOL<br>ITEMP        | LOCATION<br>100      | SYMBOL<br>CARD           | ARRAY MAP<br>LOCATION<br>104       | SYMBOL                 | LOCATION       | SYMBOL          | LOCATION       | SYMBOL           | LOCATION       |

\*OPTIONS IN EFFECT\* ID,EHCNIO,SOURCE,NOLIST,DECK,NOLoad,MAP  
 \*OPTIONS IN EFFECT\* NAME = MOVSYM \* LINECNT = 75  
 \*STATISTICS\* SOURCE STATEMENTS = 30,PROGRAM SIZE = 766  
 \*STATISTICS\* NO DIAGNOSTICS GENERATED  
 \*STATISTICS\* NO DIAGNOSTICS THIS STEP

APPENDIX C

P1A COMMON BLOCKS



\*\*\*\*\* COMMON BLOCKS \*\*\*\*\*

COMMON /BUFFER/ IUNIT(3200), LINEHD, IOLUNT,  
IUNIT(3200) BUFFER FOR RADINCE VALUES  
LINEHD LINE NUMBER  
IOLUNT SAMPLE NUMBER

COMMON /GROUPS/ KTLRBR, LABSF(30), KTLABF, LABSF(30), KTFXL(30)  
KTLRBR NUMBER OF LABELS IN PRINT REQUEST  
LABSF(30) LABELS IN REQUEST  
KTLRBF COUNT OF LABELS IN FILE  
LABSF(30) LABELS IN FILE  
KTFXL(30) COUNT OF PIXELS WITH EACH LABEL

COMMON /INFO/ NOTE(8), NUMLB, IUDATE(4,10), LBLDAT(999,5), LSTTOT,  
NOTE1(4), NUDATE  
NOTE(8) TEXT BEFORE GRID INDICES  
NUMLB NUMBER OF LABELS  
IUDATE(4,10) UPDATE DATES  
LBLDAT(999,5) LIST DATA AS LABELLED BY AI  
LSTTOT NUMBER OF DOTS IN FIRST LINE OF SELECTED DOT  
FILE (LIST) OR EXEC PARAMETER %1 %2  
NOTE1(4) COMMENT OF 16 CHARACTERS THAT FOLLOWS THE WORD \*END  
IN SELECTED DOT FILE (LIST) OR EXEC PARAMETER %1 %2  
NUDATE NUMBER OF UPDATE DATES APPEARING ON SELECTED DOT FILE  
(LIST) OR EXEC PARAMETER %1 %2

COMMON /LIST/ LIST(999,5), NDDOTS, NDCLS, ISMBLS(30)  
LIST(999,5) LIST DATA  
NDDOTS TOTAL NUMBER OF DOTS REQUIRED  
NDCLS NUMBER OF CLUSTERS  
ISMBLS(30) SYMBOLS FOR EACH CLUSTER

COMMON /MISC/ NDACO, LNSOIL(6), IACODT(6,2), AI(5), NMFILE(2),  
SEGMENT, DATE(4), IGRID(5), IGRIDN(5), NPGES, NOLNES  
NDACO NUMBER OF ACQUISITIONS ON CURRENT PAGE  
LNSOIL(6) SOIL LINE VALUES FOR EACH ACQUISITION  
IACODT(2,6) ACQUISITION DATES FOR EACH ACQUISITION  
AI ANALYST'S NAME  
NMFILE(2) NAME OF NEW LIST  
SEGMENT SEGMENT NUMBER  
DATE(4) CURRENT DATE FOR HEADING  
IGRID(5) INDEX TO FIRST VALUE IN LIST FOR CORRESPONDING GRID  
IGRIDN(5) INDEX TO LAST VALUE IN LIST FOR CORRESPONDING GRID  
NPGES CURRENT PAGE NUMBER  
NOLNES CURRENT LINE NUMBER

```

COMMON /PLOT/ NPPOINT, X(1000), Y(1000), LABELD(1000)
NPPOINT      NUMBER OF POINTS
X(1000)      X VALUES FOR PLOT
Y(1000)      Y VALUES FOR PLOT
LABELD(1000) LABELS FOR PLOT

```

```

COMMON /RADIANT/ NOCHAN, IGREEN, IBRIT, IDOTRD(999,16)
NOCHAN       NUMBER OF CHANNELS
IGREEN       CHANNEL WITH CURRENT GREEN VALUE
IBRIT        CHANNEL WITH CURRENT BRIGHT VALUE
IDOTRD(999,16) RADIANCE VALUES FOR SELECTED DOTS

```

```

COMMON /REPORT/ IAC01(999,6), IAC02(999,6), IAC03(999,6), IAC04(999,6)
IAC01(999,6) HOLD AREA FOR COLUMN 1 OF LISTING
IAC02(999,6) HOLD AREA FOR COLUMN 2 OF LISTING
IAC03(999,6) HOLD AREA FOR COLUMN 3 OF LISTING
IAC04(999,6) HOLD AREA FOR COLUMN 4 OF LISTING

```

```

COMMON /WHITE/ KFDATE, KLDATE
KFDATE       FIRST ACQUISITION NUMBER ON CURRENT PAGE
KLDATE       NUMBER OF ACQUISITIONS

```

```

***** COMMON BLOCKS FOR SELDOTS ONLY *****
COMMON /CLSTR/ NOCLS, CLSUM, ISUMCL(90), ISMBLS(90), PERCENT(32),
IDOTCL(212), IUSED(117,196), INDEXC(90), INDEX2, ITOT2
NOCLS        NUMBER OF CLUSTERS
CLSUM        SUM OF POINTS IN ALL CLUSTERS (196 + 117)
ISUMCL(90)   ARRAY OF SUM OF POINTS IN EACH CLUSTER
ISMBLS(90)   ARRAY OF SYMBOLS FOR EACH CLUSTER
PERCENT(90)  PERCENTAGED TOTAL FOR EACH CLUSTER
IDOTCL(212)  CLUSTER INDEX FOR EACH OF 209 DOTS
IUSED(117,196) SWITCH FOR DOT ALREADY SELECTED
INDEXC(90)   REVISED INDEX TO CLUSTERS AFTER SMALL CLUSTER GROUP
INDEX2       INDEX TO FIRST CLUSTER IN SMALL CLUSTER GROUP
ITOT2        TOTAL NUMBER DOTS RECD IN THE SMALL CLUSTER GROUP

```



|   |                |             |                                                                        |             |            |        |        |
|---|----------------|-------------|------------------------------------------------------------------------|-------------|------------|--------|--------|
| C | GROUP/11ETPO/1 | TOTAL       | LGRIID                                                                 | LIST(999.5) | NEEDCL(90) | NEEDGR | MLRST  |
| C |                | LTOTAL      | TOTAL NUMBER OF ELEMENTS CURRENTLY IN LIST                             |             |            |        |        |
| C |                | LGRIID      | CURRENT GRID TYPE                                                      |             |            |        |        |
| C |                | LIST(999.5) | LIST DATA. 1-HI LABEL. 2-LINE NO. 3-SAMPLE. 4-INDEX TO CLUSTER. 5-GRID |             |            |        |        |
| C |                | NEEDCL(90)  | NO. OF DOTS NEEDED TO SATISFY PROPORTION FOR CLUSTER                   |             |            |        |        |
| C |                | NEEDGR      | TOTAL NEEDED FOR ALL GROUPS REQUIRING 2 OR LESS                        |             |            |        |        |
| C |                | MLRST       | NUMBER OF LAST MEMBER OF PREVIOUS NON-HULL GROUP                       |             |            |        |        |
| C |                |             |                                                                        |             |            |        |        |
| C | COMMON/REQUIR/ | MTOTAL      | MDOTS                                                                  | MATCHS(90)  | IDATA(196) | LINENO | KOLUMN |
| C |                | ITOTAL      | TOTAL NUMBER OF DOTS REQUESTED                                         |             |            |        |        |
| C |                | MDOTS       | NUMBER OF DOTS REQUESTED                                               |             |            |        |        |
| C |                | MATCHS(90)  | NUMBER OF MATCHES FOR EACH CLUSTER                                     |             |            |        |        |
| C |                | IDATA(196)  | HOLD BUFFER FOR LINE                                                   |             |            |        |        |
| C |                | LINENO      | CURRENT LINE NUMBER                                                    |             |            |        |        |
| C |                | KOLUMN      | CURRENT COLUMN NUMBER                                                  |             |            |        |        |

APPENDIX D  
PIA OUTPUT EXAMPLES

Example of CLUSTAPE listing

INPUT IMAGE DATA TAPE INFORMATION

|                          |           |
|--------------------------|-----------|
| FORMAT                   | UNIVERSAL |
| NO. OF CHANNELS          | 1         |
| NO. OF PIXELS/LINE       | 196       |
| FIRST SCAN LINE NO.      | 1         |
| FIRST PIXEL REFERENCE PT | 1         |

1 5 1 1 ( 1, 1) ( 196, 1) ( 196, 117) ( 1, 117) ( 1, 1)

TABLE I  
SUMMARY

SITE = 1499      DATE GENERATED = APRIL 9, 1960  
ACQUISITION 1 = 77150  
ACQUISITION 2 = 77200  
ACQUISITION 3 = 77250  
ACQUISITION 4 = 77300

\*\*\*NO LABELS AVAILABLE\*\*\*  
NUMBER OF DOTS AVAILABLE = 204

Example of SELDOTS listing

ORIGINAL PAGE IS  
OF POOR QUALITY



TABLE 1A

ORIGINAL SELECTED DOTS

ORIENTED BY GRID

GRID 1

SITE = 1899      DATE GENERATED = APRIL 9, 1980

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE    SAMPLE

|       |    |     |
|-------|----|-----|
| ----- | 10 | 10  |
| ----- | 10 | 20  |
| ----- | 10 | 30  |
| ----- | 10 | 40  |
| ----- | 10 | 50  |
| ----- | 10 | 60  |
| ----- | 10 | 70  |
| ----- | 10 | 80  |
| ----- | 10 | 90  |
| ----- | 10 | 100 |
| ----- | 10 | 110 |
| ----- | 10 | 120 |
| ----- | 10 | 130 |
| ----- | 10 | 140 |
| ----- | 10 | 150 |
| ----- | 10 | 160 |
| ----- | 10 | 170 |
| ----- | 10 | 180 |
| ----- | 10 | 190 |
| ----- | 20 | 10  |
| ----- | 20 | 20  |
| ----- | 20 | 30  |
| ----- | 20 | 40  |
| ----- | 20 | 50  |

SITE = 1899 DATE GENERATED = APRIL 9, 1960

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE SAMPLE

|       |    |     |
|-------|----|-----|
| ----- | 20 | 60  |
| ----- | 20 | 70  |
| ----- | 20 | 80  |
| ----- | 20 | 90  |
| ----- | 20 | 100 |
| ----- | 20 | 110 |
| ----- | 20 | 120 |
| ----- | 20 | 130 |
| ----- | 20 | 140 |
| ----- | 20 | 150 |
| ----- | 20 | 160 |
| ----- | 20 | 170 |
| ----- | 20 | 180 |
| ----- | 20 | 190 |
| ----- | 30 | 10  |
| ----- | 30 | 20  |
| ----- | 30 | 30  |
| ----- | 30 | 40  |
| ----- | 30 | 50  |
| ----- | 30 | 60  |
| ----- | 30 | 70  |
| ----- | 30 | 80  |
| ----- | 30 | 90  |
| ----- | 30 | 100 |
| ----- | 30 | 110 |
| ----- | 30 | 120 |
| ----- | 30 | 130 |
| ----- | 30 | 140 |
| ----- | 30 | 150 |

SITE = 1899      DATE GENERATED = APRIL 9, 1980

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE    SAMPLE

|       |    |     |
|-------|----|-----|
| ----- | 30 | 160 |
| ----- | 30 | 170 |
| ----- | 30 | 180 |
| ----- | 30 | 190 |
| ----- | 40 | 10  |
| ----- | 40 | 20  |
| ----- | 40 | 30  |
| ----- | 40 | 40  |
| ----- | 40 | 50  |
| ----- | 40 | 60  |
| ----- | 40 | 70  |
| ----- | 40 | 80  |
| ----- | 40 | 90  |
| ----- | 40 | 100 |
| ----- | 40 | 110 |
| ----- | 40 | 120 |
| ----- | 40 | 130 |
| ----- | 40 | 140 |
| ----- | 40 | 150 |
| ----- | 40 | 160 |
| ----- | 40 | 170 |
| ----- | 40 | 180 |
| ----- | 40 | 190 |
| ----- | 50 | 10  |
| ----- | 50 | 20  |
| ----- | 50 | 30  |
| ----- | 50 | 40  |
| ----- | 50 | 50  |
| ----- | 50 | 60  |

SITE = 1899 DATE GENERATED = APRIL 9, 1980

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE SAMPLE

|       |    |     |
|-------|----|-----|
| ----- | 50 | 70  |
| ----- | 50 | 80  |
| ----- | 50 | 90  |
| ----- | 50 | 100 |
| ----- | 50 | 110 |
| ----- | 50 | 120 |
| ----- | 50 | 130 |
| ----- | 50 | 140 |
| ----- | 50 | 150 |
| ----- | 50 | 160 |
| ----- | 50 | 170 |
| ----- | 50 | 180 |
| ----- | 50 | 190 |
| ----- | 60 | 10  |
| ----- | 60 | 20  |
| ----- | 60 | 30  |
| ----- | 60 | 40  |
| ----- | 60 | 50  |
| ----- | 60 | 60  |
| ----- | 60 | 70  |
| ----- | 60 | 80  |
| ----- | 60 | 90  |
| ----- | 60 | 100 |
| ----- | 60 | 110 |
| ----- | 60 | 120 |
| ----- | 60 | 130 |
| ----- | 60 | 140 |
| ----- | 60 | 150 |
| ----- | 60 | 160 |



SITE = 1899      DATE GENERATED = APRIL 9, 1980

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE    SAMPLE

|       |    |     |
|-------|----|-----|
| ----- | 60 | 170 |
| ----- | 60 | 180 |
| ----- | 60 | 190 |
| ----- | 70 | 10  |
| ----- | 70 | 20  |
| ----- | 70 | 30  |
| ----- | 70 | 40  |
| ----- | 70 | 50  |
| ----- | 70 | 60  |
| ----- | 70 | 70  |
| ----- | 70 | 80  |
| ----- | 70 | 90  |
| ----- | 70 | 100 |
| ----- | 70 | 110 |
| ----- | 70 | 120 |
| ----- | 70 | 130 |
| ----- | 70 | 140 |
| ----- | 70 | 150 |
| ----- | 70 | 160 |
| ----- | 70 | 170 |
| ----- | 70 | 180 |
| ----- | 70 | 190 |
| ----- | 80 | 10  |
| ----- | 80 | 20  |
| ----- | 80 | 30  |
| ----- | 80 | 40  |
| ----- | 80 | 50  |
| ----- | 80 | 60  |
| ----- | 80 | 70  |

SITE = 1849      DATE GENERATED = APRIL 9, 1940

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE    SAMPLE

|       |    |     |
|-------|----|-----|
| ----- | 80 | 80  |
| ----- | 80 | 90  |
| ----- | 80 | 100 |
| ----- | 80 | 110 |
| ----- | 80 | 120 |
| ----- | 80 | 130 |
| ----- | 80 | 140 |
| ----- | 80 | 150 |
| ----- | 80 | 160 |
| ----- | 80 | 170 |
| ----- | 80 | 180 |
| ----- | 80 | 190 |
| ----- | 90 | 10  |
| ----- | 90 | 20  |
| ----- | 90 | 30  |
| ----- | 90 | 40  |
| ----- | 90 | 50  |
| ----- | 90 | 60  |
| ----- | 90 | 70  |
| ----- | 90 | 80  |
| ----- | 90 | 90  |
| ----- | 90 | 100 |
| ----- | 90 | 110 |
| ----- | 90 | 120 |
| ----- | 90 | 130 |
| ----- | 90 | 140 |
| ----- | 90 | 150 |
| ----- | 90 | 160 |
| ----- | 90 | 170 |

SITE = 1899      DATE GENERATED = APRIL 9, 1980

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE    SAMPLE

|       |     |     |
|-------|-----|-----|
| ----- | 90  | 180 |
| ----- | 90  | 190 |
| ----- | 100 | 10  |
| ----- | 100 | 20  |
| ----- | 100 | 30  |
| ----- | 100 | 40  |
| ----- | 100 | 50  |
| ----- | 100 | 60  |
| ----- | 100 | 70  |
| ----- | 100 | 80  |
| ----- | 100 | 90  |
| ----- | 100 | 100 |
| ----- | 100 | 110 |
| ----- | 100 | 120 |
| ----- | 100 | 130 |
| ----- | 100 | 140 |
| ----- | 100 | 150 |
| ----- | 100 | 160 |
| ----- | 100 | 170 |
| ----- | 100 | 180 |
| ----- | 100 | 190 |
| ----- | 110 | 10  |
| ----- | 110 | 20  |
| ----- | 110 | 30  |
| ----- | 110 | 40  |
| ----- | 110 | 50  |
| ----- | 110 | 60  |
| ----- | 110 | 70  |
| ----- | 110 | 80  |

SITE = 1899      DATE GENERATED = APRIL 9, 1940

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

LINE    SAMPLE

|       |     |     |
|-------|-----|-----|
| ----- | 110 | 90  |
| ----- | 110 | 100 |
| ----- | 110 | 110 |
| ----- | 110 | 120 |
| ----- | 110 | 130 |
| ----- | 110 | 140 |
| ----- | 110 | 150 |
| ----- | 110 | 160 |
| ----- | 110 | 170 |
| ----- | 110 | 180 |
| ----- | 110 | 190 |



# INPUT IMAGE DATA TAPE INFORMATION

FORMAT UNIVERSAL  
 NO. OF CHANNELS 8  
 NO. OF PIXELS/LINE 196  
 FIRST SCAN LINE NO. 1  
 FIRST PIXEL REFERENCE PT 1

Example of GPRTAPE listing

1 1 1 ( 1, 1) ( 196, 1) ( 196, 117) ( 1, 117) ( 1, 1)

TOTAL NUMBER OF LINES = 23

# INPUT SUMMARY

CHANNELS 1,2,3,4,5,6,7,8  
SOIL LINE -4,-6,-7,-1  
SEGM 1899  
DATE APRIL 9, 1980  
DOTS 400  
LABEL LABELLED  
SELECTED A,B,C  
FILE LISTGJMJ  
AI TEST AI  
ACQUIS 77150,77200,77250,77300  
\*END\*

Example of LISTDOT listing

TABLE III  
ORDERED BY GRID

SEGMENT = 1899

DATE GENERATED = APRIL 9, 1980

GRID 1

| DOT<br>NO. | LINE/<br>PIXEL | ANALYST<br>LABEL | ACQ1<br>G | 77150<br>R | ACQ2<br>G | 77200<br>R | ACQ3<br>G | 177250<br>R | ACQ4<br>G | 77300<br>R |
|------------|----------------|------------------|-----------|------------|-----------|------------|-----------|-------------|-----------|------------|
| 1          | 10             | A                | 10        | 115        | 17        | 96         | 41        | 95          | 25        | 107        |
| 2          | 20             | B                | 12        | 116        | 18        | 109        | 34        | 97          | 20        | 111        |
| 3          | 30             | C                | 11        | 113        | 19        | 109        | 20        | 134         | 11        | 105        |
| 4          | 40             | D                | 18        | 113        | 23        | 121        | 36        | 99          | 24        | 85         |
| 5          | 50             | E                | 9         | 112        | 22        | 115        | 34        | 97          | 23        | 90         |
| 6          | 60             | F                | 10        | 112        | 31        | 115        | 45        | 92          | 20        | 81         |
| 7          | 70             | G                | 10        | 112        | 28        | 109        | 48        | 75          | 28        | 83         |
| 8          | 80             | H                | 9         | 112        | 14        | 121        | 39        | 102         | 27        | 115        |
| 9          | 90             | I                | 14        | 114        | 15        | 91         | 54        | 92          | 13        | 91         |
| 10         | 100            | J                | 11        | 105        | 31        | 93         | 43        | 74          | 33        | 82         |
| 11         | 110            | K                | 9         | 104        | 22        | 78         | 36        | 80          | 22        | 79         |
| 12         | 120            | L                | 11        | 112        | 46        | 106        | 40        | 95          | 24        | 90         |
| 13         | 130            | M                | 27        | 86         | 30        | 78         | 37        | 103         | 16        | 41         |
| 14         | 140            | N                | 15        | 104        | 22        | 71         | 25        | 103         | 14        | 107        |
| 15         | 150            | O                | 14        | 109        | 15        | 82         | 17        | 116         | 9         | 95         |
| 16         | 160            | P                | 11        | 104        | 22        | 83         | 20        | 117         | 14        | 86         |
| 17         | 170            | Q                | 11        | 104        | 15        | 83         | 22        | 83          | 14        | 81         |
| 18         | 180            | R                | 11        | 104        | 12        | 83         | 47        | 105         | 23        | 113        |
| 19         | 190            | S                | 11        | 104        | 12        | 83         | 36        | 92          | 18        | 101        |
| 20         | 200            | T                | 12        | 102        | 21        | 109        | 33        | 100         | 16        | 112        |
| 21         | 210            | U                | 6         | 120        | 21        | 109        | 42        | 100         | 21        | 105        |
| 22         | 220            | V                | 37        | 94         | 23        | 122        | 52        | 98          | 22        | 70         |
| 23         | 230            | W                | 40        | 77         | 14        | 121        | 20        | 124         | 25        | 73         |
| 24         | 240            | X                | 13        | 112        | 15        | 95         | 61        | 90          | 34        | 95         |
| 25         | 250            | Y                | 12        | 107        | 15        | 87         | 33        | 100         | 34        | 93         |
| 26         | 260            | Z                | 10        | 107        | 16        | 101        | 33        | 103         | 34        | 106        |
| 27         | 270            | AA               | 14        | 106        | 26        | 81         | 32        | 99          | 34        | 104        |
| 28         | 280            | AB               | 8         | 110        | 21        | 86         | 31        | 96          | 34        | 88         |
| 29         | 290            | AC               | 10        | 107        | 32        | 105        | 25        | 95          | 34        | 95         |
| 30         | 300            | AD               | 14        | 94         | 27        | 80         | 33        | 103         | 34        | 95         |
| 31         | 310            | AE               | 24        | 94         | 27        | 81         | 30        | 95          | 34        | 106        |
| 32         | 320            | AF               | 19        | 90         | 17        | 81         | 15        | 124         | 30        | 102        |
| 33         | 330            | AG               | 18        | 90         | 21        | 90         | 17        | 91          | 30        | 126        |
| 34         | 340            | AH               | 14        | 84         | 21        | 45         | 28        | 103         | 23        | 95         |
| 35         | 350            | AI               | 16        | 89         | 14        | 78         | 32        | 101         | 26        | 99         |
| 36         | 360            | AJ               | 9         | 117        | 17        | 43         | 34        | 95          | 22        | 81         |
| 37         | 370            | AK               | 7         | 113        | 12        | 116        | 34        | 103         | 22        | 77         |
| 38         | 380            | AL               | 13        | 107        | 15        | 96         | 23        | 103         | 31        | 94         |
| 39         | 390            | AM               | 20        | 107        | 17        | 88         | 20        | 106         | 30        | 114        |
| 40         | 400            | AN               | 21        | 102        | 15        | 96         | 21        | 87          | 27        | 107        |
| 41         | 410            | AO               | 7         | 104        | 24        | 137        | 51        | 69          | 27        | 72         |
| 42         | 420            | AP               | 35        | 47         | 25        | 128        | 17        | 146         | 34        | 78         |
| 43         | 430            | AQ               | 12        | 115        | 15        | 83         | 35        | 97          | 32        | 96         |
| 44         | 440            | AR               | 12        | 113        | 15        | 101        | 38        | 104         | 32        | 103        |
| 45         | 450            | AS               | 12        | 113        | 10        | 106        | 31        | 105         | 22        | 114        |
| 46         | 460            | AT               | 12        | 113        | 13        | 85         | 24        | 99          | 23        | 92         |
| 47         | 470            | AU               | 22        | 95         | 15        | 73         | 37        | 97          | 25        | 95         |
| 48         | 480            | AV               | 12        | 115        | 25        | 89         | 35        | 97          | 16        | 97         |
| 49         | 490            | AW               | 12        | 115        | 23        | 96         | 30        | 92          | 14        | 101        |
| 50         | 500            | AX               | 15        | 99         | 37        | 110        | 38        | 40          | 17        | 89         |
| 51         | 510            | AY               | 15        | 90         | 37        | 110        | 49        | 72          | 20        | 84         |
| 52         | 520            | AZ               | 22        | 96         | 13        | 49         | 24        | 102         | 22        | 78         |
| 53         | 530            | BA               | 16        | 96         | 13        | 86         | 18        | 90          | 22        | 100        |
| 54         | 540            | BB               | 14        | 96         | 13        | 86         | 55        | 75          | 37        | 72         |
| 55         | 550            | BC               | 11        | 96         | 15        | 75         | 32        | 79          | 37        | 101        |
| 56         | 560            | BD               | 11        | 96         | 35        | 109        | 39        | 110         | 37        | 110        |
| 57         | 570            | BE               | 10        | 96         | 26        | 111        | 20        | 81          | 37        | 98         |
| 58         | 580            | BF               | 17        | 121        | 17        | 101        | 31        | 92          | 27        | 107        |
| 59         | 590            | BG               | 14        | 116        | 15        | 104        | 37        | 104         | 23        | 104        |

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## GRID 1

| DOT<br>NO. | LINE/<br>PIXEL | ANALYST<br>LABEL | AC01 77150<br>G H | AC02 77200<br>G H | AC03 177250<br>G H | AC04 77300<br>G H |
|------------|----------------|------------------|-------------------|-------------------|--------------------|-------------------|
| 62         | 40             | 50               | 24                | 115               | 17                 | 79                |
| 63         | 40             | 50               | 22                | 112               | 21                 | 90                |
| 64         | 40             | 70               | 14                | 118               | 15                 | 103               |
| 65         | 40             | 80               | 10                | 112               | 20                 | 80                |
| 66         | 40             | 90               | 14                | 90                | 24                 | 84                |
| 67         | 40             | 100              | 16                | 106               | 23                 | 84                |
| 68         | 40             | 110              | 12                | 111               | 29                 | 97                |
| 69         | 40             | 120              | 15                | 109               | 22                 | 78                |
| 70         | 40             | 130              | 17                | 121               | 15                 | 96                |
| 71         | 40             | 140              | 21                | 94                | 21                 | 96                |
| 72         | 40             | 150              | 14                | 114               | 18                 | 93                |
| 73         | 40             | 160              | 13                | 100               | 20                 | 77                |
| 74         | 40             | 170              | 15                | 104               | 38                 | 111               |
| 75         | 40             | 180              | 15                | 108               | 35                 | 103               |
| 76         | 40             | 190              | 14                | 105               | 46                 | 92                |
| 77         | 50             | 10               | 18                | 107               | 20                 | 96                |
| 78         | 50             | 20               | 10                | 143               | 26                 | 103               |
| 79         | 50             | 30               | 9                 | 122               | 32                 | 48                |
| 80         | 50             | 40               | 28                | 106               | 15                 | 84                |
| 81         | 50             | 50               | 9                 | 122               | 16                 | 73                |
| 82         | 50             | 60               | 19                | 93                | 17                 | 67                |
| 83         | 50             | 70               | 10                | 119               | 36                 | 100               |
| 84         | 50             | 80               | 29                | 101               | 23                 | 75                |
| 85         | 50             | 90               | 15                | 98                | 26                 | 94                |
| 86         | 50             | 100              | 13                | 102               | 16                 | 99                |
| 87         | 50             | 110              | 17                | 104               | 19                 | 90                |
| 88         | 50             | 120              | 14                | 101               | 25                 | 91                |
| 89         | 50             | 130              | 11                | 104               | 45                 | 83                |
| 90         | 50             | 140              | 23                | 101               | 58                 | 68                |
| 91         | 50             | 150              | 16                | 108               | 91                 | 121               |
| 92         | 50             | 160              | 15                | 106               | 20                 | 82                |
| 93         | 50             | 170              | 21                | 104               | 21                 | 85                |
| 94         | 50             | 180              | 10                | 132               | 24                 | 76                |
| 95         | 50             | 190              | 15                | 131               | 17                 | 101               |
| 96         | 60             | 10               | 12                | 112               | 10                 | 83                |
| 97         | 60             | 20               | 13                | 107               | 31                 | 76                |
| 98         | 60             | 30               | 25                | 112               | 17                 | 81                |
| 99         | 60             | 40               | 23                | 117               | 14                 | 91                |
| 100        | 60             | 50               | 24                | 97                | 17                 | 67                |
| 101        | 60             | 60               | 39                | 49                | 14                 | 144               |
| 102        | 60             | 70               | 12                | 118               | 38                 | 91                |
| 103        | 60             | 80               | 16                | 125               | 16                 | 112               |
| 104        | 60             | 90               | 18                | 105               | 15                 | 102               |
| 105        | 60             | 100              | 36                | 100               | 17                 | 137               |
| 106        | 60             | 110              | 34                | 92                | 17                 | 135               |
| 107        | 60             | 120              | 12                | 99                | 35                 | 102               |
| 108        | 60             | 130              | 8                 | 93                | 28                 | 102               |
| 109        | 60             | 140              | 23                | 100               | 21                 | 82                |
| 110        | 60             | 150              | 17                | 96                | 20                 | 75                |
| 111        | 60             | 160              | 10                | 127               | 14                 | 98                |
| 112        | 60             | 170              | 13                | 99                | 35                 | 96                |
| 113        | 60             | 180              | 12                | 88                | 42                 | 96                |
| 114        | 60             | 190              | 12                | 94                | 31                 | 96                |
| 115        | 70             | 10               | 26                | 122               | 23                 | 94                |
| 116        | 70             | 20               | 24                | 120               | 18                 | 95                |
| 117        | 70             | 30               | 13                | 122               | 33                 | 111               |
| 118        | 70             | 40               | 10                | 111               | 27                 | 102               |
| 119        | 70             | 50               | 7                 | 109               | 14                 | 81                |
| 120        | 70             | 60               | 10                | 132               | 18                 | 109               |
| 121        | 70             | 70               | 6                 | 131               | 26                 | 103               |
| 122        | 70             | 80               | 15                | 120               | 21                 | 107               |
| 123        | 70             | 90               | 26                | 99                | 21                 | 75                |
| 124        | 70             | 100              | 25                | 112               | 18                 | 80                |
| 125        | 70             | 110              | 20                | 96                | 22                 | 78                |
| 126        | 70             | 120              | 9                 | 114               | 18                 | 127               |
| 24         | 115            |                  |                   |                   |                    |                   |
| 17         | 79             |                  |                   |                   |                    |                   |
| 20         | 140            |                  |                   |                   |                    |                   |
| 11         | 101            |                  |                   |                   |                    |                   |
| 15         | 138            |                  |                   |                   |                    |                   |
| 15         | 139            |                  |                   |                   |                    |                   |
| 14         | 102            |                  |                   |                   |                    |                   |
| 22         | 87             |                  |                   |                   |                    |                   |
| 25         | 93             |                  |                   |                   |                    |                   |
| 23         | 133            |                  |                   |                   |                    |                   |
| 12         | 105            |                  |                   |                   |                    |                   |
| 23         | 85             |                  |                   |                   |                    |                   |
| 19         | 80             |                  |                   |                   |                    |                   |
| 19         | 103            |                  |                   |                   |                    |                   |
| 14         | 99             |                  |                   |                   |                    |                   |
| 27         | 79             |                  |                   |                   |                    |                   |
| 19         | 89             |                  |                   |                   |                    |                   |
| 14         | 88             |                  |                   |                   |                    |                   |
| 15         | 96             |                  |                   |                   |                    |                   |
| 21         | 83             |                  |                   |                   |                    |                   |
| 12         | 96             |                  |                   |                   |                    |                   |
| 13         | 97             |                  |                   |                   |                    |                   |
| 28         | 96             |                  |                   |                   |                    |                   |
| 21         | 102            |                  |                   |                   |                    |                   |
| 11         | 105            |                  |                   |                   |                    |                   |
| 15         | 108            |                  |                   |                   |                    |                   |
| 25         | 94             |                  |                   |                   |                    |                   |
| 26         | 93             |                  |                   |                   |                    |                   |
| 22         | 81             |                  |                   |                   |                    |                   |
| 12         | 90             |                  |                   |                   |                    |                   |
| 20         | 104            |                  |                   |                   |                    |                   |
| 7          | 129            |                  |                   |                   |                    |                   |
| 7          | 130            |                  |                   |                   |                    |                   |
| 23         | 98             |                  |                   |                   |                    |                   |
| 26         | 94             |                  |                   |                   |                    |                   |
| 9          | 109            |                  |                   |                   |                    |                   |
| 19         | 100            |                  |                   |                   |                    |                   |
| 12         | 98             |                  |                   |                   |                    |                   |
| 8          | 106            |                  |                   |                   |                    |                   |
| 7          | 118            |                  |                   |                   |                    |                   |
| 12         | 98             |                  |                   |                   |                    |                   |
| 14         | 74             |                  |                   |                   |                    |                   |
| 12         | 111            |                  |                   |                   |                    |                   |
| 21         | 85             |                  |                   |                   |                    |                   |
| 14         | 96             |                  |                   |                   |                    |                   |
| 21         | 88             |                  |                   |                   |                    |                   |
| 37         | 35             |                  |                   |                   |                    |                   |
| 20         | 123            |                  |                   |                   |                    |                   |
| 17         | 82             |                  |                   |                   |                    |                   |
| 15         | 87             |                  |                   |                   |                    |                   |
| 13         | 90             |                  |                   |                   |                    |                   |
| 9          | 113            |                  |                   |                   |                    |                   |
| 10         | 121            |                  |                   |                   |                    |                   |
| 10         | 124            |                  |                   |                   |                    |                   |
| 15         | 138            |                  |                   |                   |                    |                   |
| 15         | 86             |                  |                   |                   |                    |                   |
| 15         | 127            |                  |                   |                   |                    |                   |
| 16         | 111            |                  |                   |                   |                    |                   |
| 8          | 133            |                  |                   |                   |                    |                   |
| 14         | 114            |                  |                   |                   |                    |                   |



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DATE GENERATED = APRIL 9, 1980

## GRID 1

| DOT<br>NO. | LINE/<br>PIXEL | ANALYST<br>LABEL | AC01 77150<br>G H | AC02 77200<br>G H | AC03 77250<br>G H | AC04 77300<br>G H |
|------------|----------------|------------------|-------------------|-------------------|-------------------|-------------------|
| 127        | 70 130         |                  | 9 108             | 22 121            | 28 115            | 20 109            |
| 128        | 70 140         |                  | 11 116            | 22 126            | 33 116            | 13 140            |
| 129        | 70 150         |                  | 12 111            | 22 125            | 36 124            | 13 145            |
| 130        | 70 160         |                  | 12 122            | 19 102            | 26 134            | 14 119            |
| 131        | 70 170         |                  | 13 105            | 25 112            | 35 105            | 25 105            |
| 132        | 70 180         |                  | 11 98             | 22 117            | 31 90             | 21 122            |
| 133        | 70 190         |                  | 11 112            | 25 117            | 27 103            | 17 120            |
| 134        | 80 10          |                  | 15 129            | 23 112            | 12 117            | 11 130            |
| 135        | 80 20          |                  | 7 110             | 27 123            | 26 93             | 20 101            |
| 136        | 80 30          |                  | 14 111            | 47 94             | 40 74             | 25 107            |
| 137        | 80 40          |                  | 18 107            | 16 104            | 33 115            | 38 75             |
| 138        | 80 50          |                  | 30 41             | 14 127            | 29 125            | 35 61             |
| 139        | 80 60          |                  | 14 111            | 13 95             | 35 101            | 9 121             |
| 140        | 80 70          |                  | 12 111            | 27 120            | 31 116            | 15 124            |
| 141        | 80 80          |                  | 18 113            | 13 87             | 12 104            | 12 124            |
| 142        | 80 90          |                  | 6 117             | 15 104            | 29 106            | 34 101            |
| 143        | 80 100         |                  | 9 112             | 30 114            | 33 100            | 18 115            |
| 144        | 80 110         |                  | 9 102             | 19 116            | 43 93             | 24 94             |
| 145        | 80 120         |                  | 13 117            | 20 104            | 20 133            | 4 145             |
| 146        | 80 130         |                  | 15 125            | 16 87             | 9 149             | 13 123            |
| 147        | 80 140         |                  | 15 131            | 26 98             | 9 139             | 11 125            |
| 148        | 80 150         |                  | 17 114            | 15 95             | 17 99             | 15 94             |
| 149        | 80 160         |                  | 13 116            | 24 92             | 20 129            | 38 64             |
| 150        | 80 170         |                  | 18 107            | 21 84             | 19 91             | 11 125            |
| 151        | 80 180         |                  | 12 117            | 21 109            | 20 129            | 14 106            |
| 152        | 80 190         |                  | 11 104            | 15 85             | 4 143             | 30 114            |
| 153        | 90 10          |                  | 24 98             | 25 80             | 20 81             | 9 105             |
| 154        | 90 20          |                  | 14 100            | 41 94             | 21 87             | 10 103            |
| 155        | 90 30          |                  | 20 99             | 32 97             | 37 91             | 11 113            |
| 156        | 90 40          |                  | 15 121            | 15 113            | 34 105            | 21 109            |
| 157        | 90 50          |                  | 31 102            | 21 123            | 27 124            | 43 96             |
| 158        | 90 60          |                  | 10 113            | 16 88             | 24 106            | 18 98             |
| 159        | 90 70          |                  | 10 135            | 15 126            | 13 155            | 3 139             |
| 160        | 90 80          |                  | 17 120            | 15 113            | 20 100            | 6 136             |
| 161        | 90 90          |                  | 14 106            | 31 83             | 38 74             | 25 83             |
| 162        | 90 100         |                  | 10 103            | 22 123            | 18 93             | 8 114             |
| 163        | 90 110         |                  | 8 108             | 19 134            | 18 108            | 2 140             |
| 164        | 90 120         |                  | 9 106             | 27 119            | 18 97             | 7 116             |
| 165        | 90 130         |                  | 6 123             | 23 130            | 24 114            | 11 117            |
| 166        | 90 140         |                  | 4 117             | 19 94             | 35 107            | 20 106            |
| 167        | 90 150         |                  | 17 111            | 15 84             | 47 84             | 28 84             |
| 168        | 90 160         |                  | 8 115             | 18 74             | 17 97             | 5 118             |
| 169        | 90 170         |                  | 13 100            | 16 66             | 31 97             | 16 112            |
| 170        | 90 180         |                  | 17 114            | 19 97             | 26 84             | 10 100            |
| 171        | 90 190         |                  | 9 97              | 14 69             | 21 125            | 8 87              |
| 172        | 100 10         |                  | 11 106            | 41 97             | 43 97             | 21 89             |
| 173        | 100 20         |                  | 40 96             | 18 114            | 20 113            | 14 120            |
| 174        | 100 30         |                  | 27 109            | 15 73             | 21 84             | 12 97             |
| 175        | 100 40         |                  | 8 113             | 18 114            | 33 105            | 12 142            |
| 176        | 100 50         |                  | 10 105            | 24 103            | 24 101            | 16 117            |
| 177        | 100 60         |                  | 12 104            | 23 95             | 23 119            | 20 104            |
| 178        | 100 70         |                  | 21 111            | 18 67             | 35 95             | 13 113            |
| 179        | 100 80         |                  | 22 109            | 20 88             | 14 139            | 17 110            |
| 180        | 100 90         |                  | 9 125             | 33 114            | 25 108            | 20 118            |
| 181        | 100 100        |                  | 15 101            | 20 75             | 31 104            | 32 108            |
| 182        | 100 110        |                  | 9 104             | 17 117            | 23 85             | 14 94             |
| 183        | 100 120        |                  | 8 104             | 27 114            | 25 95             | 20 94             |
| 184        | 100 130        |                  | 9 108             | 25 118            | 40 96             | 20 116            |
| 185        | 100 140        |                  | 9 109             | 22 121            | 35 105            | 19 120            |
| 186        | 100 150        |                  | 7 109             | 32 114            | 30 108            | 18 124            |
| 187        | 100 160        |                  | 22 106            | 21 75             | 33 87             | 24 89             |
| 188        | 100 170        |                  | 12 111            | 19 92             | 17 112            | 21 114            |
| 189        | 100 180        |                  | 7 102             | 21 87             | 30 76             | 23 116            |
| 190        | 100 190        |                  | 7 110             | 23 85             | 31 75             | 27 105            |
| 191        | 110 10         |                  | 8 124             | 12 103            | 36 100            | 22 105            |

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## GRID 1

| DOT<br>NO. | LINE/<br>PIXEL | ANALYSIS<br>LABEL | ACQ1 77150<br>G H | ACQ2 77200<br>G H | ACQ3 177250<br>G H | ACQ4 77300<br>G H |    |     |    |     |
|------------|----------------|-------------------|-------------------|-------------------|--------------------|-------------------|----|-----|----|-----|
| 192        | 110            | 20                | 33                | 103               | 23                 | 142               | 14 | 97  | 10 | 130 |
| 193        | 110            | 30                | 9                 | 103               | 24                 | 40                | 39 | 47  | 13 | 115 |
| 194        | 110            | 40                | 14                | 97                | 26                 | 103               | 40 | 75  | 21 | 105 |
| 195        | 110            | 50                | 9                 | 107               | 34                 | 125               | 29 | 125 | 16 | 111 |
| 196        | 110            | 60                | 10                | 103               | 15                 | 104               | 9  | 154 | 13 | 106 |
| 197        | 110            | 70                | 14                | 95                | 15                 | 64                | 14 | 130 | 13 | 107 |
| 198        | 110            | 80                | 12                | 99                | 25                 | 162               | 33 | 93  | 26 | 95  |
| 199        | 110            | 90                | 25                | 94                | 21                 | 65                | 13 | 121 | 16 | 109 |
| 200        | 110            | 100               | 4                 | 98                | 17                 | 107               | 29 | 111 | 21 | 100 |
| 201        | 110            | 110               | 19                | 104               | 13                 | 115               | 30 | 105 | 13 | 116 |
| 202        | 110            | 120               | 33                | 96                | 24                 | 132               | 23 | 49  | 24 | 76  |
| 203        | 110            | 130               | 26                | 114               | 17                 | 115               | 18 | 106 | 25 | 53  |
| 204        | 110            | 140               | 10                | 119               | 15                 | 101               | 37 | 90  | 23 | 104 |
| 205        | 110            | 150               | 7                 | 116               | 24                 | 162               | 33 | 93  | 31 | 87  |
| 206        | 110            | 160               | 12                | 97                | 23                 | 91                | 31 | 95  | 17 | 95  |
| 207        | 110            | 170               | 10                | 114               | 15                 | 73                | 14 | 115 | 17 | 123 |
| 208        | 110            | 180               | 11                | 98                | 21                 | 76                | 34 | 74  | 17 | 45  |
| 209        | 110            | 190               | 11                | 102               | 27                 | 108               | 29 | 102 | 17 | 90  |

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DATE GENERATED = APRIL 9, 1980

GRID 2

| LINE/<br>PIXEL | ANALYST<br>LABEL | AC01 77150<br>G | AC02 77200<br>G | AC03 177250<br>G | AC04 177300<br>G |
|----------------|------------------|-----------------|-----------------|------------------|------------------|
| 12             | 109              | 101             | 41              | 23               | 102              |
| 30             | 119              | 88              | 16              | 15               | 121              |
| 13             | 144              | 96              | 28              | 11               | 112              |
| 8              | 154              | 113             | 40              | 11               | 120              |
| 24             | 107              | 85              | 14              | 12               | 91               |
| 25             | 105              | 88              | 13              | 139              | 111              |
| 12             | 105              | 83              | 38              | 98               | 95               |
| 17             | 91               | 92              | 49              | 89               | 73               |
| 11             | 117              | 91              | 37              | 99               | 48               |
| 10             | 104              | 86              | 34              | 89               | 93               |
| 5              | 101              | 97              | 20              | 117              | 98               |
| 24             | 101              | 89              | 34              | 93               | 84               |
| 4              | 152              | 126             | 32              | 105              | 125              |
| 18             | 105              | 76              | 17              | 118              | 99               |
| 23             | 100              | 75              | 19              | 118              | 83               |
| 10             | 106              | 81              | 32              | 81               | 79               |
| 11             | 111              | 85              | 24              | 87               | 82               |
| 11             | 117              | 101             | 28              | 127              | 103              |
| 11             | 112              | 108             | 42              | 105              | 89               |
| 9              | 107              | 116             | 50              | 88               | 84               |
| 1              | 97               | 105             | 54              | 78               | 85               |
| 1              | 114              | 104             | 53              | 96               | 82               |
| 1              | 117              | 89              | 55              | 84               | 101              |
| 2              | 102              | 34              | 28              | 92               | 90               |
| 9              | 99               | 85              | 43              | 90               | 106              |
| 12             | 104              | 88              | 38              | 97               | 96               |
| 12             | 102              | 102             | 34              | 96               | 77               |
| 10             | 91               | 111             | 35              | 97               | 94               |
| 43             | 48               | 93              | 44              | 90               | 88               |
| 23             | 89               | 71              | 45              | 91               | 87               |
| 17             | 101              | 76              | 17              | 144              | 104              |
| 13             | 115              | 91              | 31              | 109              | 133              |
| 13             | 118              | 82              | 37              | 83               | 90               |
| 6              | 120              | 116             | 42              | 103              | 95               |
| 19             | 127              | 1102            | 38              | 92               | 109              |
| 19             | 115              | 113             | 43              | 102              | 110              |
| 1              | 101              | 1137            | 39              | 101              | 107              |
| 37             | 89               | 131             | 21              | 132              | 86               |
| 10             | 115              | 90              | 40              | 105              | 75               |
| 25             | 111              | 83              | 44              | 87               | 100              |
| 25             | 107              | 97              | 53              | 85               | 98               |
| 25             | 109              | 77              | 31              | 88               | 95               |
| 15             | 97               | 86              | 35              | 91               | 101              |
| 25             | 102              | 74              | 38              | 91               | 88               |
| 12             | 99               | 82              | 21              | 105              | 104              |
| 12             | 113              | 120             | 42              | 97               | 98               |
| 11             | 113              | 97              | 45              | 98               | 100              |
| 12             | 117              | 44              | 35              | 100              | 93               |
| 11             | 110              | 77              | 37              | 91               | 99               |
| 43             | 117              | 105             | 18              | 110              | 105              |
| 8              | 130              | 112             | 19              | 100              | 94               |
| 17             | 114              | 103             | 31              | 110              | 107              |
| 9              | 108              | 94              | 17              | 93               | 75               |
| 15             | 130              | 59              | 17              | 83               | 64               |
| 11             | 113              | 95              | 33              | 102              | 102              |
|                |                  | 100             | 41              | 95               | 107              |

ORIGINAL PAGE IS  
OF POOR QUALITY

SEGMENT = 1899

DATE GENERATED = APRIL 24 1980

GRID 2

| LINE/<br>PIXEL | ANALYST<br>LABEL | ACQ1 77150<br>G H | ACQ2 77200<br>G H | ACQ3 177250<br>G H | ACQ4 77300<br>G H |
|----------------|------------------|-------------------|-------------------|--------------------|-------------------|
| 35             | 85               | 18                | 112               | 24                 | 165               |
| 35             | 95               | 19                | 100               | 21                 | 99                |
| 35             | 105              | 15                | 96                | 15                 | 91                |
| 35             | 115              | 10                | 102               | 15                 | 103               |
| 35             | 125              | 18                | 105               | 17                 | 81                |
| 35             | 135              | 24                | 107               | 19                 | 73                |
| 35             | 145              | 15                | 92                | 35                 | 193               |
| 35             | 155              | 12                | 98                | 31                 | 233               |
| 35             | 165              | 12                | 108               | 31                 | 233               |
| 35             | 175              | 14                | 106               | 39                 | 223               |
| 35             | 185              | 14                | 104               | 24                 | 115               |
| 35             | 195              | 8                 | 124               | 35                 | 86                |
| 45             | 15               | 4                 | 120               | 34                 | 107               |
| 45             | 35               | 11                | 100               | 36                 | 111               |
| 45             | 45               | 15                | 101               | 39                 | 103               |
| 45             | 55               | 21                | 111               | 39                 | 109               |
| 45             | 65               | 15                | 112               | 37                 | 144               |
| 45             | 75               | 13                | 119               | 40                 | 108               |
| 45             | 85               | 7                 | 106               | 49                 | 91                |
| 45             | 95               | 17                | 105               | 21                 | 82                |
| 45             | 105              | 14                | 98                | 22                 | 81                |
| 45             | 115              | 8                 | 123               | 34                 | 107               |
| 45             | 125              | 7                 | 117               | 34                 | 101               |
| 45             | 135              | 11                | 97                | 34                 | 95                |
| 45             | 145              | 15                | 99                | 36                 | 87                |
| 45             | 155              | 10                | 103               | 43                 | 83                |
| 45             | 165              | 10                | 107               | 30                 | 89                |
| 45             | 175              | 30                | 104               | 21                 | 88                |
| 45             | 185              | 24                | 108               | 24                 | 84                |
| 55             | 15               | 4                 | 105               | 24                 | 111               |
| 55             | 25               | 14                | 105               | 34                 | 95                |
| 55             | 35               | 18                | 99                | 49                 | 91                |
| 55             | 45               | 31                | 88                | 20                 | 118               |
| 55             | 55               | 15                | 97                | 19                 | 102               |
| 55             | 65               | 37                | 97                | 34                 | 89                |
| 55             | 75               | 11                | 101               | 23                 | 124               |
| 55             | 85               | 12                | 94                | 49                 | 93                |
| 55             | 95               | 12                | 94                | 22                 | 87                |
| 55             | 105              | 21                | 113               | 25                 | 84                |
| 55             | 115              | 15                | 117               | 31                 | 82                |
| 55             | 125              | 19                | 123               | 21                 | 88                |
| 55             | 135              | 11                | 131               | 33                 | 87                |
| 55             | 145              | 13                | 142               | 35                 | 90                |
| 55             | 155              | 18                | 121               | 33                 | 102               |
| 55             | 165              | 15                | 109               | 24                 | 106               |
| 55             | 175              | 25                | 100               | 10                 | 126               |
| 55             | 185              | 15                | 124               | 37                 | 94                |
| 55             | 195              | 12                | 118               | 24                 | 101               |
| 65             | 15               | 39                | 114               | 44                 | 84                |
| 65             | 25               | 8                 | 121               | 22                 | 107               |
| 65             | 35               | 13                | 103               | 24                 | 107               |
| 65             | 45               | 13                | 100               | 40                 | 92                |
| 65             | 55               | 22                | 114               | 36                 | 85                |
| 65             | 65               | 22                | 111               | 116                | 76                |
| 65             | 75               | 17                | 111               | 127                | 91                |
| 65             | 85               | 14                | 120               | 77                 | 77                |
| 65             | 95               | 14                | 129               | 41                 | 116               |
| 65             | 105              | 19                | 127               | 40                 | 102               |
| 65             | 115              | 15                | 126               | 33                 | 102               |
| 65             | 125              | 11                | 128               | 26                 | 125               |
| 65             | 135              | 14                | 113               | 19                 | 147               |
| 65             | 145              | 23                | 111               | 39                 | 113               |
| 65             | 155              | 20                | 105               | 19                 | 143               |
| 65             | 165              | 12                | 106               | 19                 | 157               |



SEGMENT = 1899

DATE GENERATED = APRIL 9, 1980

GRID 2

| LINE/<br>PIXEL | ANALYST<br>LABEL | ACQ1 77150<br>G A | ACQ2 77200<br>G H | ACQ3 177250<br>G A | ACQ4 77300<br>G H |
|----------------|------------------|-------------------|-------------------|--------------------|-------------------|
| 75 115         |                  | 18 114            | 19 89             | 24 100             | 8 123             |
| 75 125         |                  | 5 130             | 18 144            | 27 130             | 18 124            |
| 75 135         |                  | 19 112            | 21 48             | 19 147             | 5 122             |
| 75 145         |                  | 14 105            | 24 48             | 21 134             | 19 77             |
| 75 155         |                  | 9 99              | 63 94             | 62 70              | 35 76             |
| 75 165         |                  | 9 117             | 20 115            | 51 114             | 31 114            |
| 75 175         |                  | 13 103            | 25 115            | 43 96              | 19 95             |
| 75 185         |                  | 13 103            | 24 120            | 35 112             | 27 131            |
| 75 195         |                  | 4 131             | 17 114            | 54 100             | 32 75             |
| 85 5           |                  | 14 104            | 81 97             | 35 83              | 15 99             |
| 85 15          |                  | 21 106            | 25 97             | 42 83              | 28 95             |
| 85 25          |                  | 23 111            | 20 93             | 25 85              | 15 102            |
| 85 35          |                  | 7 124             | 16 105            | 35 104             | 27 108            |
| 85 45          |                  | 36 94             | 22 129            | 23 121             | 37 84             |
| 85 55          |                  | 10 106            | 21 123            | 31 114             | 27 109            |
| 85 65          |                  | 13 103            | 17 117            | 32 112             | 18 117            |
| 85 75          |                  | 12 109            | 21 104            | 40 115             | 28 103            |
| 85 85          |                  | 7 108             | 23 120            | 35 105             | 22 105            |
| 85 95          |                  | 13 103            | 25 115            | 34 97              | 21 94             |
| 85 105         |                  | 12 108            | 35 113            | 37 102             | 25 91             |
| 85 115         |                  | 21 122            | 15 75             | 20 95              | 7 131             |
| 85 125         |                  | 22 135            | 16 70             | 17 95              | 12 113            |
| 85 135         |                  | 28 110            | 17 65             | 21 133             | 11 99             |
| 85 145         |                  | 11 105            | 25 101            | 24 98              | 43 89             |
| 85 155         |                  | 43 98             | 25 129            | 23 119             | 25 85             |
| 85 165         |                  | 42 88             | 23 104            | 19 114             | 32 89             |
| 85 175         |                  | 25 119            | 13 105            | 19 124             | 17 118            |
| 85 185         |                  | 13 119            | 17 106            | 55 95              | 25 97             |
| 85 195         |                  | 17 102            | 19 87             | 34 88              | 25 93             |
| 95 5           |                  | 12 104            | 34 104            | 34 93              | 27 97             |
| 95 15          |                  | 28 115            | 18 87             | 14 134             | 11 111            |
| 95 25          |                  | 10 98             | 18 77             | 30 100             | 21 97             |
| 95 35          |                  | 11 112            | 37 128            | 22 120             | 21 103            |
| 95 45          |                  | 8 109             | 25 121            | 17 89              | 13 118            |
| 95 55          |                  | 8 111             | 22 123            | 16 97              | 7 118             |
| 95 65          |                  | 9 124             | 17 82             | 18 112             | 25 107            |
| 95 75          |                  | 28 104            | 13 106            | 14 134             | 11 100            |
| 95 85          |                  | 12 112            | 15 83             | 25 91              | 11 95             |
| 95 95          |                  | 11 95             | 21 63             | 41 30              | 23 78             |
| 95 105         |                  | 14 111            | 17 107            | 35 108             | 30 84             |
| 95 115         |                  | 55 96             | 17 121            | 37 88              | 8 105             |
| 95 125         |                  | 31 102            | 13 115            | 27 99              | 16 98             |
| 95 135         |                  | 12 107            | 13 101            | 22 102             | 4 112             |
| 95 145         |                  | 13 99             | 15 71             | 24 134             | 4 102             |
| 95 155         |                  | 27 104            | 19 115            | 21 125             | 4 97              |
| 95 165         |                  | 11 104            | 17 100            | 41 82              | 27 98             |
| 95 175         |                  | 12 103            | 35 75             | 14 127             | 8 112             |
| 95 185         |                  | 16 99             | 25 71             | 41 100             | 22 89             |
| 95 195         |                  | 15 106            | 16 71             | 29 99              | 22 95             |
| 105 5          |                  | 33 96             | 17 128            | 24 106             | 20 100            |
| 105 15         |                  | 40 106            | 17 117            | 22 105             | 28 100            |
| 105 25         |                  | 13 117            | 21 107            | 37 105             | 17 108            |
| 105 35         |                  | 20 113            | 25 85             | 38 94              | 20 97             |
| 105 45         |                  | 12 112            | 11 91             | 44 103             | 15 94             |
| 105 55         |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 65         |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 75         |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 85         |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 95         |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 105        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 115        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 125        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 135        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 145        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 155        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 165        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 175        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 185        |                  | 11 111            | 11 107            | 16 107             | 24 117            |
| 105 195        |                  | 11 111            | 11 107            | 16 107             | 24 117            |

SEGMENT = 1899

DATE GENERATED = APRIL 9, 1980

GRID 2

| LINE/ | ANALYST | ACQ1 77150 | ACQ2 77200 | ACQ3 77250 | ACQ4 77300 |
|-------|---------|------------|------------|------------|------------|
| PIXEL | LABEL   | G H        | G H        | G H        | G H        |
| 5     | 85      | 14         | 117        | 22         | 123        |
| 5     | 85      | 17         | 113        | 27         | 125        |
| 5     | 85      | 15         | 106        | 31         | 105        |
| 5     | 85      | 11         | 90         | 32         | 112        |
| 5     | 85      | 9          | 103        | 31         | 103        |
| 5     | 85      | 11         | 105        | 37         | 90         |
| 5     | 85      | 12         | 94         | 23         | 97         |
| 5     | 85      | 14         | 102        | 25         | 89         |
| 5     | 85      | 12         | 100        | 34         | 74         |
| 5     | 85      | 13         | 95         | 35         | 84         |

SEGMENT = 1899

DATE GENERATED = APRIL 24 1980

GRID 1

| LINE# | PIXEL | ANALYST LABEL | ACQ1 77150<br>G H | ACQ2 77200<br>G H | ACQ3 177250<br>G H | ACQ4 77300<br>G H |
|-------|-------|---------------|-------------------|-------------------|--------------------|-------------------|
| 70    | 75    |               | 13 118            | 21 112            | 29 109             | 10 122            |
| 80    | 48    |               | 31 98             | 14 120            | 22 124             | 45 68             |
| 90    | 48    |               | 18 118            | 17 119            | 26 113             | 36 76             |

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# TRACIT SUMMARY

CHANNEL 1-2-3-4-5-6-7-8  
 CATH LINE -4-5-6-7-8-9-10  
 DATE 1999  
 DATE ADPTL 30. 1960  
 DATE 1  
 LABEL LABELLED  
 REFLECTED 5.0.0  
 FILE LISTG III  
 AT TEST 11  
 ADDRESS 7H160.7H232.7H260.7-30.  
 OF 1.0

Example of LISTGRN listing



1940-1941 年 12 月 1 日 1941 年 12 月 1 日

ACCEPTED 1894

140 *Journal of American Studies*, 40, 1996[illegible]



ORIGINAL PAGE IS  
OF POOR QUALITY



[illegible]

| AC 11 74140 |        |     |       |     | AC 11 74232 |        |     |       |     | AC 13 74204 |        |     |       |     | AC 14 74304 |        |     |       |     |
|-------------|--------|-----|-------|-----|-------------|--------|-----|-------|-----|-------------|--------|-----|-------|-----|-------------|--------|-----|-------|-----|
| LINE/       | BRIGHT | DOT | LINE/ |     | LINE/       | BRIGHT | DOT | LINE/ |     | LINE/       | BRIGHT | DOT | LINE/ |     | LINE/       | BRIGHT | DOT | LINE/ |     |
| NO.         | DESS   | NO. | PIECL |     | NO.         | DESS   | NO. | PIECL |     | NO.         | DESS   | NO. | PIECL |     | NO.         | DESS   | NO. | PIECL |     |
| 25          | 94     | 199 | 110   | 60  | 9           | 75     | 118 | 80    | 140 | 47          | 51     | 110 | 60    | 150 | 24          | 70     | 202 | 110   | 120 |
| 26          | 112    | 98  | 50    | 40  | 9           | 115    | 105 | 10    | 80  | 47          | 54     | 120 | 70    | 60  | 25          | 84     | 144 | 40    | 110 |
| 26          | 112    | 124 | 70    | 100 | 9           | 124    | 97  | 10    | 50  | 47          | 100    | 23  | 70    | 40  | 29          | 100    | 40  | 30    | 80  |
| 26          | 99     | 124 | 70    | 100 | 9           | 93     | 70  | 20    | 10  | 47          | 70     | 10  | 10    | 100 | 30          | 81     | 40  | 10    | 60  |
| 26          | 114    | 203 | 110   | 100 | 9           | 105    | 60  | 20    | 100 | 47          | 50     | 30  | 80    | 40  | 30          | 117    | 152 | 40    | 193 |
| 26          | 122    | 115 | 10    | 100 | 9           | 115    | 105 | 100   | 150 | 47          | 50     | 144 | 80    | 40  | 31          | 77     | 34  | 30    | 10  |
| 27          | 94     | 15  | 10    | 100 | 9           | 111    | 117 | 70    | 30  | 47          | 57     | 172 | 100   | 10  | 31          | 87     | 205 | 110   | 150 |
| 27          | 109    | 174 | 10    | 100 | 9           | 119    | 100 | 100   | 30  | 47          | 53     | 83  | 80    | 120 | 32          | 84     | 50  | 10    | 120 |
| 28          | 106    | 60  | 50    | 100 | 9           | 100    | 83  | 80    | 10  | 47          | 57     | 6   | 10    | 60  | 30          | 95     | 45  | 30    | 70  |
| 28          | 115    | 62  | 40    | 100 | 9           | 105    | 105 | 110   | 80  | 47          | 51     | 98  | 60    | 30  | 32          | 100    | 141 | 100   | 100 |
| 29          | 97     | 100 | 60    | 100 | 9           | 110    | 110 | 50    | 170 | 47          | 50     | 167 | 40    | 150 | 33          | 82     | 10  | 10    | 100 |
| 29          | 101    | 74  | 80    | 100 | 9           | 122    | 107 | 20    | 120 | 47          | 105    | 20  | 20    | 10  | 33          | 85     | 124 | 70    | 150 |
| 30          | 81     | 104 | 60    | 100 | 9           | 103    | 75  | 20    | 170 | 47          | 70     | 7   | 10    | 70  | 34          | 70     | 44  | 30    | 60  |
| 31          | 102    | 187 | 60    | 100 | 9           | 109    | 80  | 60    | 10  | 47          | 72     | 53  | 30    | 150 | 34          | 74     | 105 | 60    | 100 |
| 31          | 95     | 202 | 110   | 100 | 9           | 110    | 92  | 60    | 150 | 47          | 50     | 102 | 60    | 70  | 34          | 110    | 130 | 70    | 160 |
| 31          | 107    | 122 | 110   | 100 | 9           | 110    | 102 | 60    | 70  | 50          | 72     | 107 | 60    | 120 | 37          | 72     | 50  | 30    | 180 |
| 35          | 67     | 144 | 70    | 100 | 9           | 111    | 74  | 40    | 170 | 51          | 54     | 43  | 30    | 30  | 37          | 85     | 110 | 60    | 150 |
| 36          | 100    | 195 | 60    | 100 | 9           | 112    | 172 | 100   | 10  | 51          | 51     | 103 | 50    | 50  | 37          | 81     | 130 | 40    | 50  |
| 37          | 91     | 24  | 20    | 100 | 9           | 104    | 104 | 40    | 20  | 51          | 57     | 50  | 40    | 30  | 37          | 84     | 144 | 40    | 160 |
| 39          | 89     | 101 | 60    | 100 | 9           | 113    | 113 | 50    | 170 | 52          | 53     | 24  | 20    | 30  | 37          | 75     | 137 | 40    | 40  |
| 39          | 92     | 106 | 60    | 110 | 9           | 93     | 80  | 80    | 140 | 52          | 75     | 56  | 30    | 160 | 37          | 101    | 142 | 40    | 90  |
| 40          | 86     | 14  | 10    | 100 | 9           | 92     | 70  | 40    | 170 | 52          | 53     | 59  | 50    | 130 | 43          | 80     | 157 | 40    | 50  |
| 40          | 94     | 25  | 20    | 100 | 9           | 105    | 110 | 10    | 130 | 52          | 57     | 9   | 10    | 90  | 45          | 86     | 120 | 70    | 60  |
| 40          | 96     | 173 | 100   | 20  | 9           | 95     | 130 | 20    | 30  | 51          | 50     | 26  | 20    | 70  | 45          | 81     | 14  | 10    | 140 |

```

PAGE 001
CATE LINE      1 2 3 4 5 6 7 8
CATE          - 4 - 4 - 4 - 1
DATE          1999
TIME          1
DATE          APRIL 30 1999
TIME          1
LABEL         LABELLED
CHRGED TO     S.C.
FILE          LISTG LST
AL            TEST 01
ACQUIS        16160.74232.7-265.1-30.
OF 000

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Example of MULTIHIT listing



SEQUENT = 1000.

DATE: 1970-10-10 10:10:10

| ACU1 74100 |        |       |       |       |       |       |       |       |       | ACU3 74268 |        |       |       |       |       |       |       |       |       | ACU4 74304 |        |       |       |       |       |       |       |       |       |       |       |
|------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NO.        | BRIGHT | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | NO.        | BRIGHT | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | NO.        | BRIGHT | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ | LINE/ |       |       |
| NO.        | NESS   | COUNT | PIXEL | NO.   | NESS  | COUNT | PIXEL | NO.   | NESS  | COUNT      | PIXEL  | NO.   | NESS  | COUNT | PIXEL | NO.   | NESS  | COUNT | PIXEL | NO.        | NESS   | COUNT | PIXEL | NO.   | NESS  | COUNT | PIXEL | NO.   | NESS  | COUNT | PIXEL |
| 13         | 100    | 2     | 40 90 | 22    | 100   | 2     | 40 90 | 31    | 100   | 2          | 40 90  | 40    | 100   | 2     | 40 90 | 49    | 100   | 2     | 40 90 | 58         | 100    | 2     | 40 90 | 67    | 100   | 2     | 40 90 | 76    | 100   | 2     | 40 90 |
| 13         | 100    | 2     | 40 90 | 22    | 100   | 2     | 40 90 | 31    | 100   | 2          | 40 90  | 40    | 100   | 2     | 40 90 | 49    | 100   | 2     | 40 90 | 58         | 100    | 2     | 40 90 | 67    | 100   | 2     | 40 90 | 76    | 100   | 2     | 40 90 |
| 14         | 107    | 2     | 40 90 | 23    | 107   | 2     | 40 90 | 32    | 107   | 2          | 40 90  | 41    | 107   | 2     | 40 90 | 50    | 107   | 2     | 40 90 | 59         | 107    | 2     | 40 90 | 68    | 107   | 2     | 40 90 | 77    | 107   | 2     | 40 90 |
| 13         | 107    | 2     | 40 90 | 23    | 107   | 2     | 40 90 | 32    | 107   | 2          | 40 90  | 41    | 107   | 2     | 40 90 | 50    | 107   | 2     | 40 90 | 59         | 107    | 2     | 40 90 | 68    | 107   | 2     | 40 90 | 77    | 107   | 2     | 40 90 |
| 13         | 117    | 2     | 40 90 | 24    | 117   | 2     | 40 90 | 33    | 117   | 2          | 40 90  | 42    | 117   | 2     | 40 90 | 51    | 117   | 2     | 40 90 | 60         | 117    | 2     | 40 90 | 69    | 117   | 2     | 40 90 | 78    | 117   | 2     | 40 90 |
| 13         | 117    | 2     | 40 90 | 24    | 117   | 2     | 40 90 | 33    | 117   | 2          | 40 90  | 42    | 117   | 2     | 40 90 | 51    | 117   | 2     | 40 90 | 60         | 117    | 2     | 40 90 | 69    | 117   | 2     | 40 90 | 78    | 117   | 2     | 40 90 |
| 14         | 97     | 2     | 40 90 | 25    | 97    | 2     | 40 90 | 34    | 97    | 2          | 40 90  | 43    | 97    | 2     | 40 90 | 52    | 97    | 2     | 40 90 | 61         | 97     | 2     | 40 90 | 70    | 97    | 2     | 40 90 | 79    | 97    | 2     | 40 90 |
| 14         | 97     | 2     | 40 90 | 25    | 97    | 2     | 40 90 | 34    | 97    | 2          | 40 90  | 43    | 97    | 2     | 40 90 | 52    | 97    | 2     | 40 90 | 61         | 97     | 2     | 40 90 | 70    | 97    | 2     | 40 90 | 79    | 97    | 2     | 40 90 |
| 16         | 111    | 2     | 40 90 | 26    | 111   | 2     | 40 90 | 35    | 111   | 2          | 40 90  | 44    | 111   | 2     | 40 90 | 53    | 111   | 2     | 40 90 | 62         | 111    | 2     | 40 90 | 71    | 111   | 2     | 40 90 | 80    | 111   | 2     | 40 90 |
| 16         | 111    | 2     | 40 90 | 26    | 111   | 2     | 40 90 | 35    | 111   | 2          | 40 90  | 44    | 111   | 2     | 40 90 | 53    | 111   | 2     | 40 90 | 62         | 111    | 2     | 40 90 | 71    | 111   | 2     | 40 90 | 80    | 111   | 2     | 40 90 |
| 16         | 112    | 2     | 40 90 | 27    | 112   | 2     | 40 90 | 36    | 112   | 2          | 40 90  | 45    | 112   | 2     | 40 90 | 54    | 112   | 2     | 40 90 | 63         | 112    | 2     | 40 90 | 72    | 112   | 2     | 40 90 | 81    | 112   | 2     | 40 90 |
| 16         | 112    | 2     | 40 90 | 27    | 112   | 2     | 40 90 | 36    | 112   | 2          | 40 90  | 45    | 112   | 2     | 40 90 | 54    | 112   | 2     | 40 90 | 63         | 112    | 2     | 40 90 | 72    | 112   | 2     | 40 90 | 81    | 112   | 2     | 40 90 |
| 18         | 109    | 2     | 40 90 | 28    | 109   | 2     | 40 90 | 37    | 109   | 2          | 40 90  | 46    | 109   | 2     | 40 90 | 55    | 109   | 2     | 40 90 | 64         | 109    | 2     | 40 90 | 73    | 109   | 2     | 40 90 | 82    | 109   | 2     | 40 90 |
| 18         | 109    | 2     | 40 90 | 28    | 109   | 2     | 40 90 | 37    | 109   | 2          | 40 90  | 46    | 109   | 2     | 40 90 | 55    | 109   | 2     | 40 90 | 64         | 109    | 2     | 40 90 | 73    | 109   | 2     | 40 90 | 82    | 109   | 2     | 40 90 |
| 18         | 131    | 2     | 40 90 | 29    | 131   | 2     | 40 90 | 38    | 131   | 2          | 40 90  | 47    | 131   | 2     | 40 90 | 56    | 131   | 2     | 40 90 | 65         | 131    | 2     | 40 90 | 74    | 131   | 2     | 40 90 | 83    | 131   | 2     | 40 90 |
| 18         | 131    | 2     | 40 90 | 29    | 131   | 2     | 40 90 | 38    | 131   | 2          | 40 90  | 47    | 131   | 2     | 40 90 | 56    | 131   | 2     | 40 90 | 65         | 131    | 2     | 40 90 | 74    | 131   | 2     | 40 90 | 83    | 131   | 2     | 40 90 |
| 17         | 114    | 2     | 40 90 | 30    | 114   | 2     | 40 90 | 39    | 114   | 2          | 40 90  | 48    | 114   | 2     | 40 90 | 57    | 114   | 2     | 40 90 | 66         | 114    | 2     | 40 90 | 75    | 114   | 2     | 40 90 | 84    | 114   | 2     | 40 90 |
| 17         | 114    | 2     | 40 90 | 30    | 114   | 2     | 40 90 | 39    | 114   | 2          | 40 90  | 48    | 114   | 2     | 40 90 | 57    | 114   | 2     | 40 90 | 66         | 114    | 2     | 40 90 | 75    | 114   | 2     | 40 90 | 84    | 114   | 2     | 40 90 |
| 17         | 121    | 2     | 40 90 | 31    | 121   | 2     | 40 90 | 40    | 121   | 2          | 40 90  | 49    | 121   | 2     | 40 90 | 58    | 121   | 2     | 40 90 | 67         | 121    | 2     | 40 90 | 76    | 121   | 2     | 40 90 | 85    | 121   | 2     | 40 90 |
| 17         | 121    | 2     | 40 90 | 31    | 121   | 2     | 40 90 | 40    | 121   | 2          | 40 90  | 49    | 121   | 2     | 40 90 | 58    | 121   | 2     | 40 90 | 67         | 121    | 2     | 40 90 | 76    | 121   | 2     | 40 90 | 85    | 121   | 2     | 40 90 |
| 14         | 167    | 3     | 40 90 | 41    | 167   | 3     | 40 90 | 50    | 167   | 3          | 40 90  | 59    | 167   | 3     | 40 90 | 68    | 167   | 3     | 40 90 | 77         | 167    | 3     | 40 90 | 86    | 167   | 3     | 40 90 | 95    | 167   | 3     | 40 90 |
| 14         | 167    | 3     | 40 90 | 41    | 167   | 3     | 40 90 | 50    | 167   | 3          | 40 90  | 59    | 167   | 3     | 40 90 | 68    | 167   | 3     | 40 90 | 77         | 167    | 3     | 40 90 | 86    | 167   | 3     | 40 90 | 95    | 167   | 3     | 40 90 |
| 14         | 167    | 3     | 40 90 | 41    | 167   | 3     | 40 90 | 50    | 167   | 3          | 40 90  | 59    | 167   | 3     | 40 90 | 68    | 167   | 3     | 40 90 | 77         | 167    | 3     | 40 90 | 86    | 167   | 3     | 40 90 | 95    | 167   | 3     | 40 90 |
| 25         | 112    | 2     | 40 90 | 42    | 112   | 2     | 40 90 | 51    | 112   | 2          | 40 90  | 60    | 112   | 2     | 40 90 | 69    | 112   | 2     | 40 90 | 78         | 112    | 2     | 40 90 | 87    | 112   | 2     | 40 90 | 96    | 112   | 2     | 40 90 |
| 25         | 112    | 2     | 40 90 | 42    | 112   | 2     | 40 90 | 51    | 112   | 2          | 40 90  | 60    | 112   | 2     | 40 90 | 69    | 112   | 2     | 40 90 | 78         | 112    | 2     | 40 90 | 87    | 112   | 2     | 40 90 | 96    | 112   | 2     | 40 90 |



INPUT SUMMARY

CHANNELS 1,2,3,4,5,6,7,8  
SOIL LINE -4,-6,-9,-1  
SEGS 1899  
DATE ADDII 9. 1989  
DOTS 400  
LABEL UNLABELLED  
SELECTED A.R.C  
FILE LISTG.MJ  
AI TEST AI  
ACQUIS 77150.77200.77250.77300  
#100

Example of unlabelled SCATTER listing



SITE = 1899 DATE GENERATED = APRIL 9, 1980

ACQUISITION = 77150

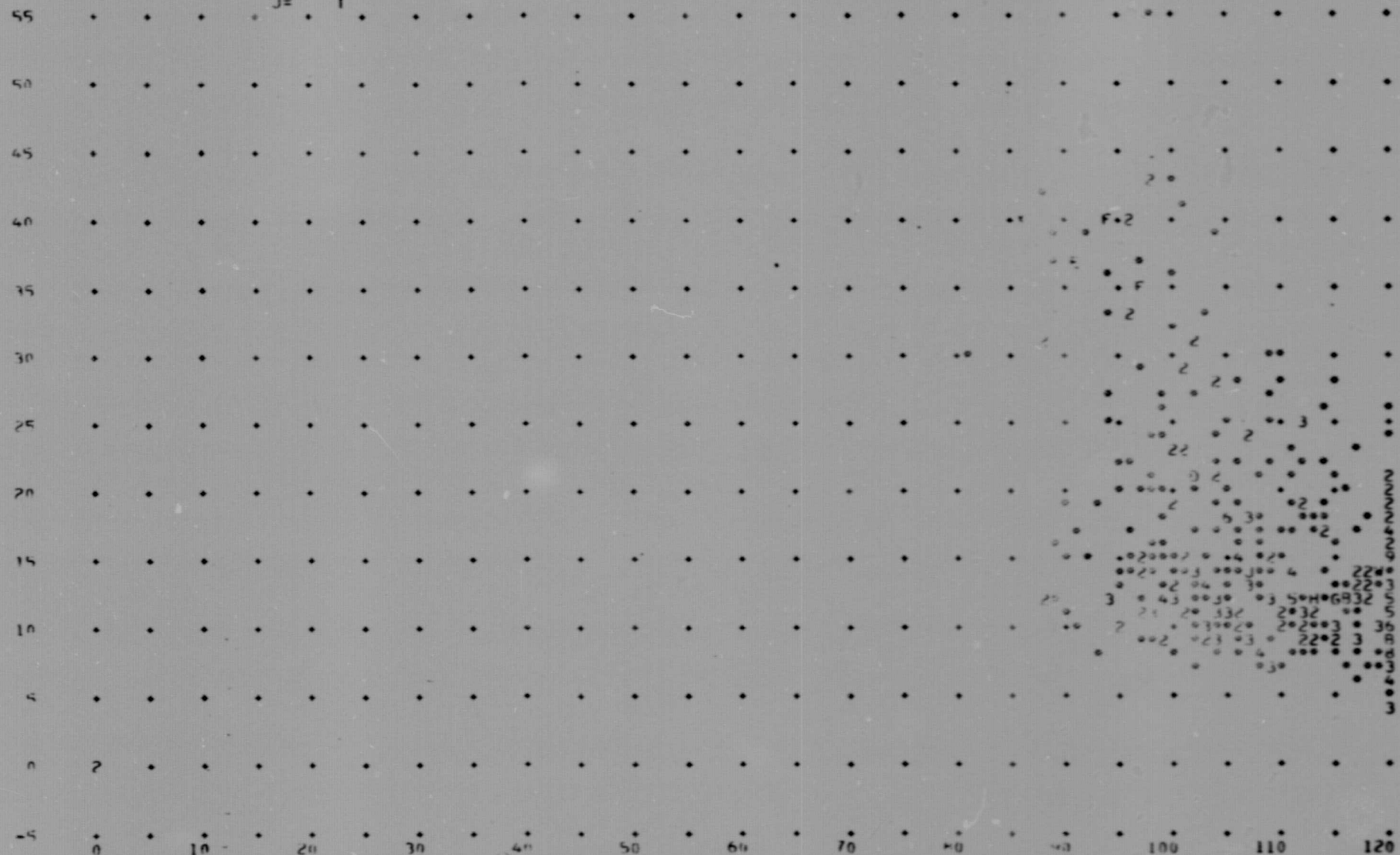
J= 1

A= 3 H= 3 C= 3

\*\*\*CATEGORY OF INTEREST\*\*\*

AVERAGE SOIL GREENNESS = -4

I= 3 F= 3 F= 3 G= 3 H= 3 W= 1 X= 1



ORIGINAL PAGE IS  
OF POOR QUALITY

SITE = 1899 DATE GENERATED = APRIL 9, 1980

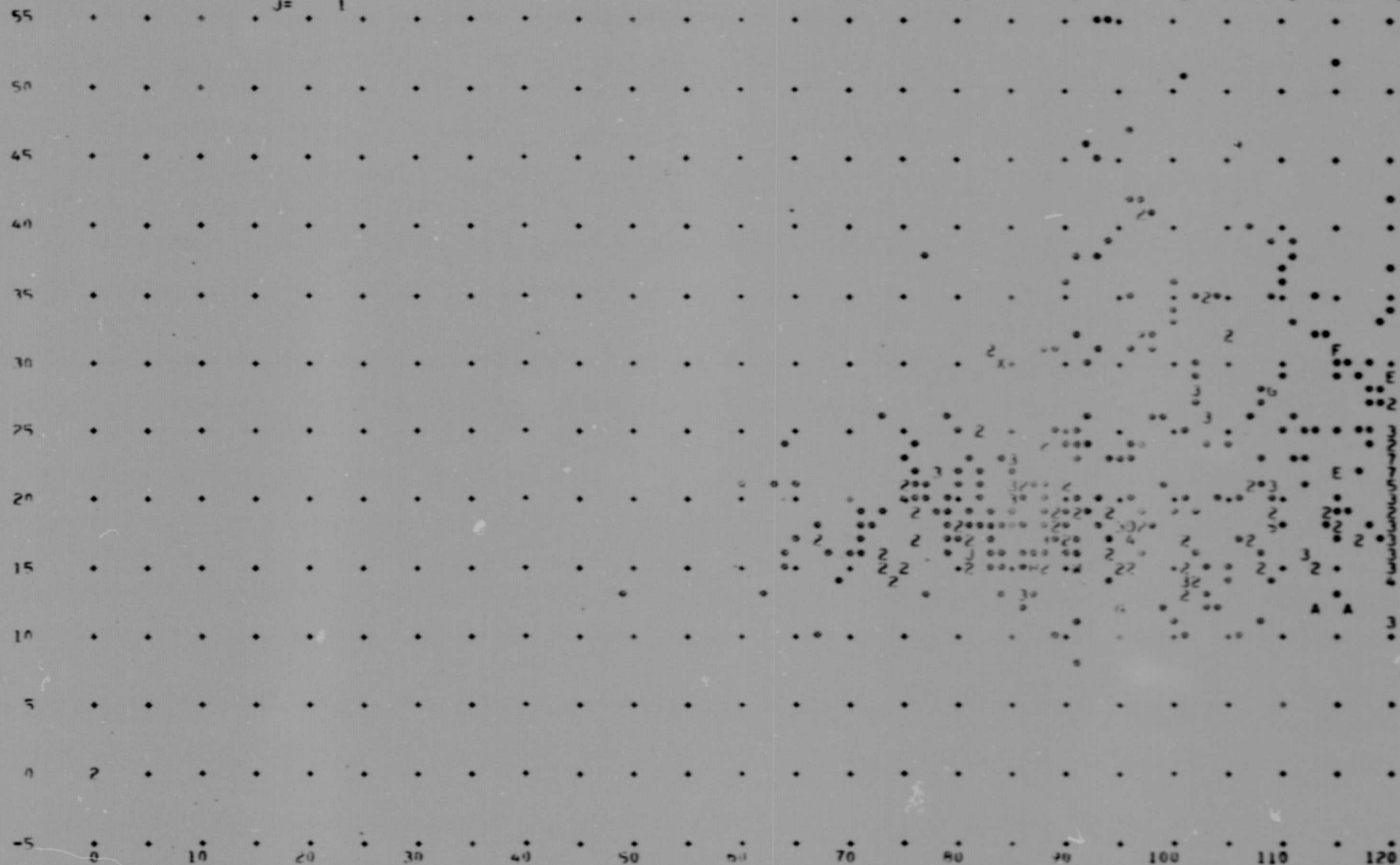
\*\*\*CATEGORY OF INTEREST\*\*\*

AVERAGE SOIL GREENESS = -6

ACQUISITION = 77200

J= 1

A= 3 H= 3 C= 3 O= 3 K= 3 F= 3 G= 3 M= 3 N= 1 X= 1



$$J = 1$$

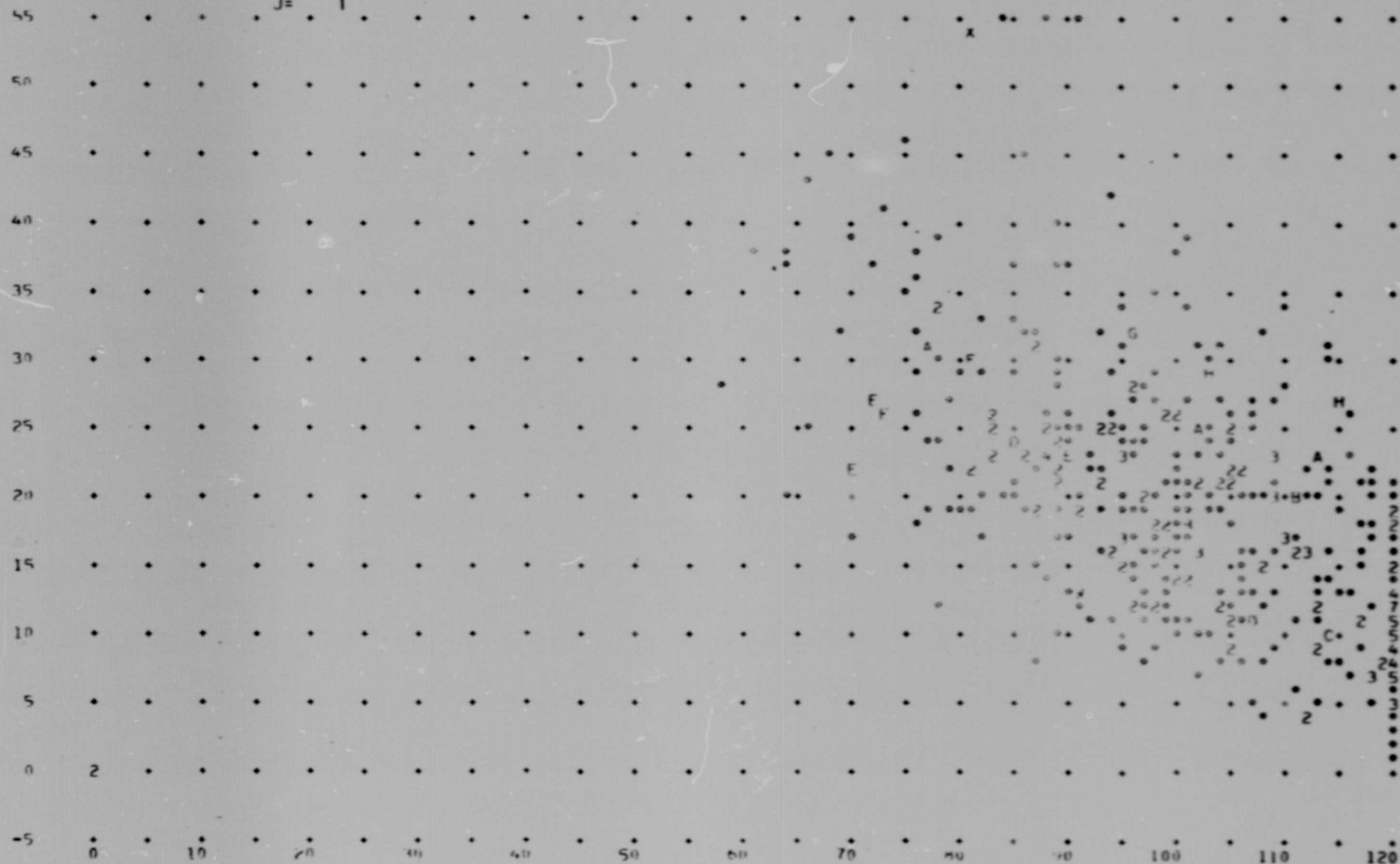

SITE = 1899 DATE GENERATED = APRIL 9, 1980

\*\*\*CATEGORY OF INTEREST\*\*\*

AVERAGE SOIL GREENNESS = -1

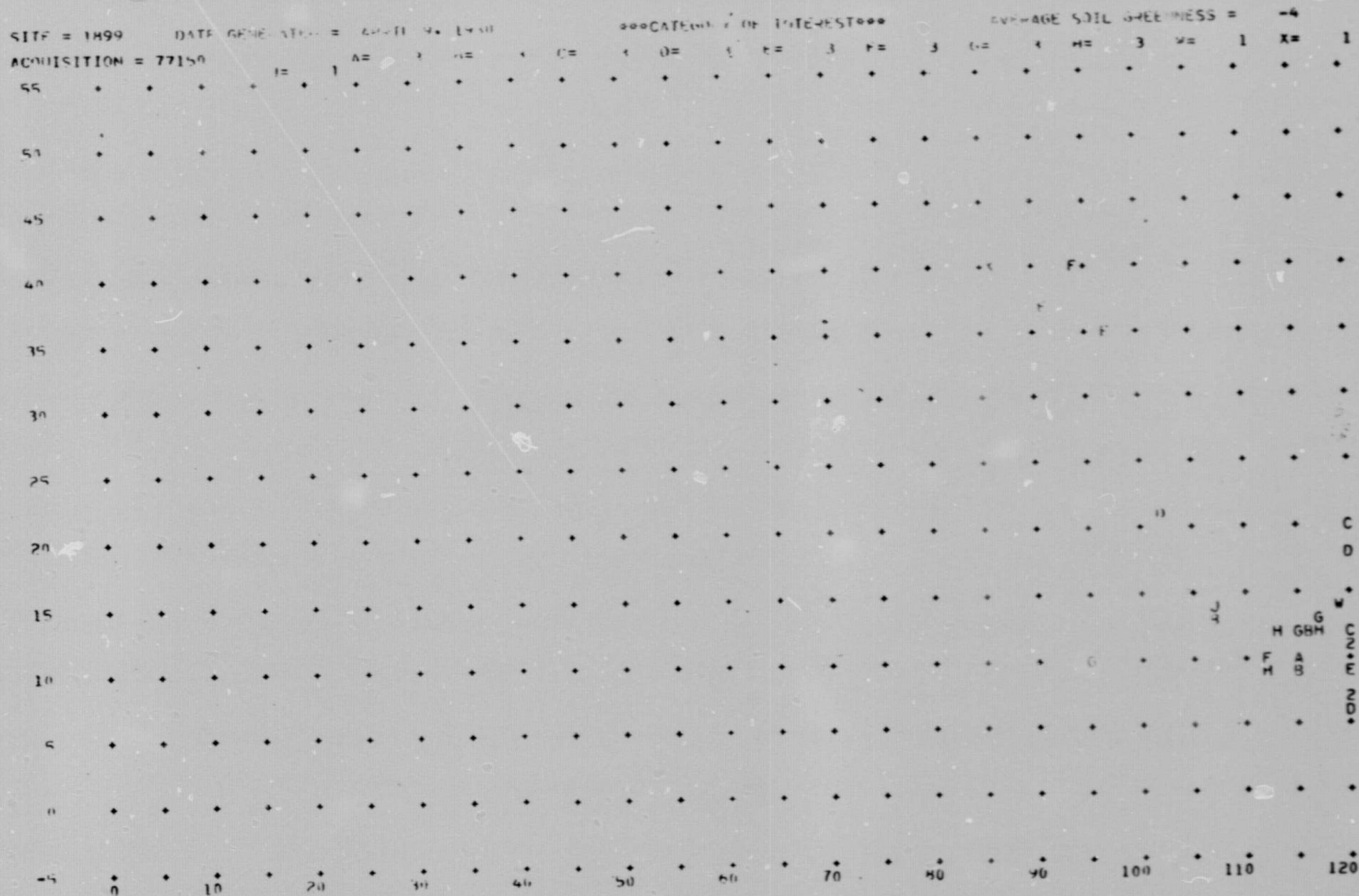
ACQUISITION = 77300

J= 1 A= 3 H= 1 C= 1 D= 1 E= 3 F= 3 G= 3 H= 3 W= 1 X= 1





Example of labelled SCATTER listing



AVERAGE SOIL WATER PRESS = -0

[illegible]

ORIGINAL PAGE IS  
OF POOR QUALITY

327

SITE = 1894      DATE OF PLANTING = 6-11-1977      OVERCATCH BY INTERSTRESS      AVERAGE SOIL OVERCATCH = -9  
 ACQUISITION = 77250      1=      2=      3=      4=      5=      6=      7=      8=      9=      10=      11=      12=      13=      14=      15=      16=      17=      18=      19=      20=      21=      22=      23=      24=      25=      26=      27=      28=      29=      30=      31=      32=      33=      34=      35=      36=      37=      38=      39=      40=      41=      42=      43=      44=      45=      46=      47=      48=      49=      50=      51=      52=      53=      54=      55=      56=      57=      58=      59=      60=      61=      62=      63=      64=      65=      66=      67=      68=      69=      70=      71=      72=      73=      74=      75=      76=      77=      78=      79=      80=      81=      82=      83=      84=      85=      86=      87=      88=      89=      90=      91=      92=      93=      94=      95=      96=      97=      98=      99=      100=      101=      102=      103=      104=      105=      106=      107=      108=      109=      110=      111=      112=      113=      114=      115=      116=      117=      118=      119=      120=

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SITE = 1499

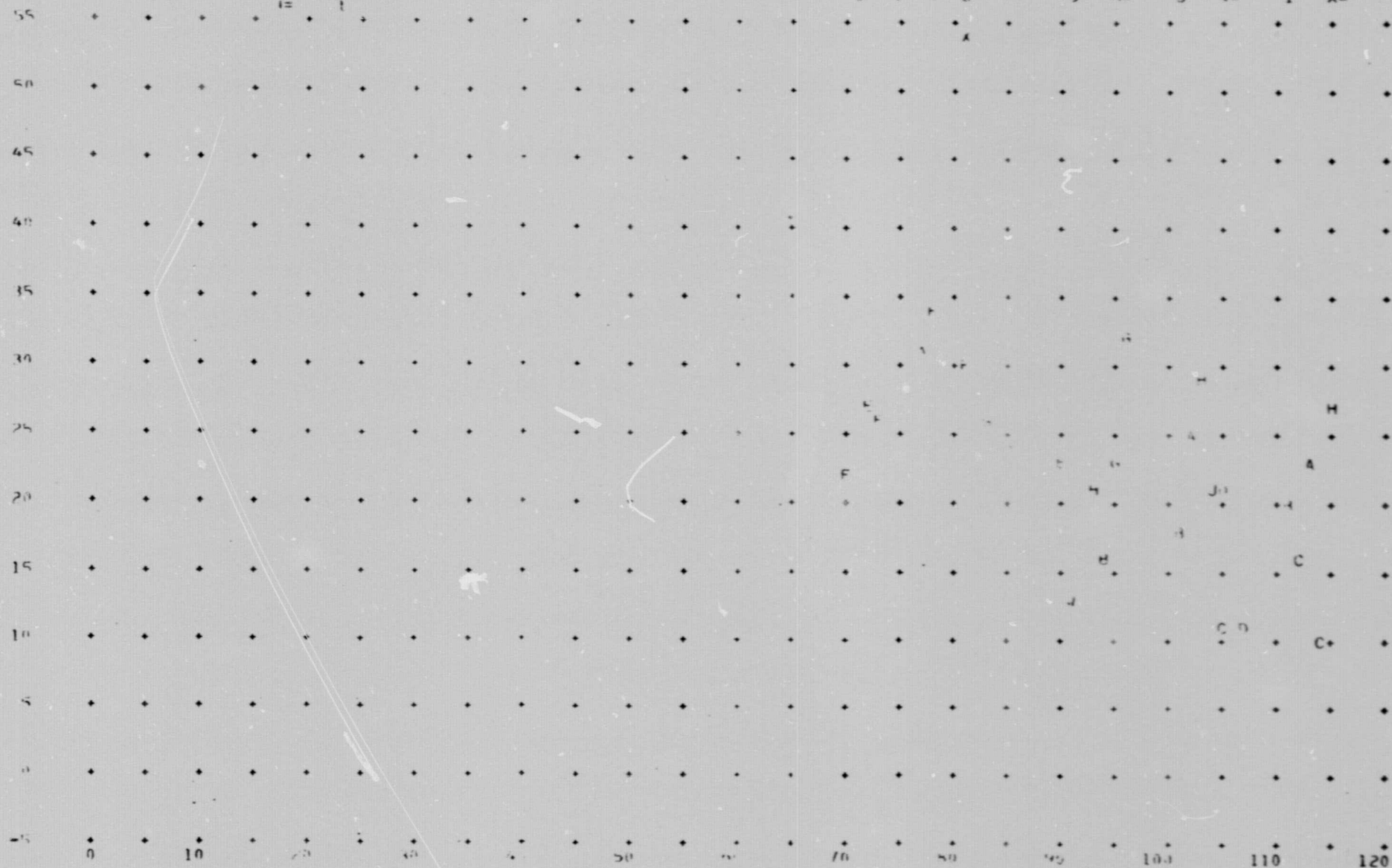
DATE GROUNDWATER = APRIL 14 1960

\*\*\*CATEGORY OF INTEREST\*\*\*

AVERAGE SOIL WATER PRESS = -1

ACQUISITION = 77300

I= 1 F= 3 H= 3 X= 1





CHASER C 1x2x3x4x5x6x7x8  
SGH LIT+ -4x-5x-6x-7  
SAY H99  
DATA ADOH 31x IQ  
DATA I  
L3001 LABEL E  
CHXCTED S...  
FILE LISTG.H  
SI TACT AT  
AC HIG 78160./-272./-272./-272.  
QY 10

TOTAL NUMBER OF DOTS = 244

$$\begin{array}{l} \Delta(\dots) \vdash \{S, T\} \vdash \{G, H\} = \{I, J\} \text{ and } \\ \vdash \{G, H\} \vdash \{I, J\} = \{K, L\} \end{array}$$
[illegible]

1-4

| Year | 1965 | 1966 | 1967 |
|------|------|------|------|
| 1    | 10   | 10   |      |
| 2    | 10   | 20   |      |

| LINE | PIXEL | LEVEL |
|------|-------|-------|
| 1    | 10    | 10    |
| 2    | 10    | 10    |
| 3    | 10    | 10    |

Number of species

Number of individuals

1941, p. 18-19

ORIGINAL PAGE IS  
OF POOR QUALITY



DATE = 1899 DATE OF ...

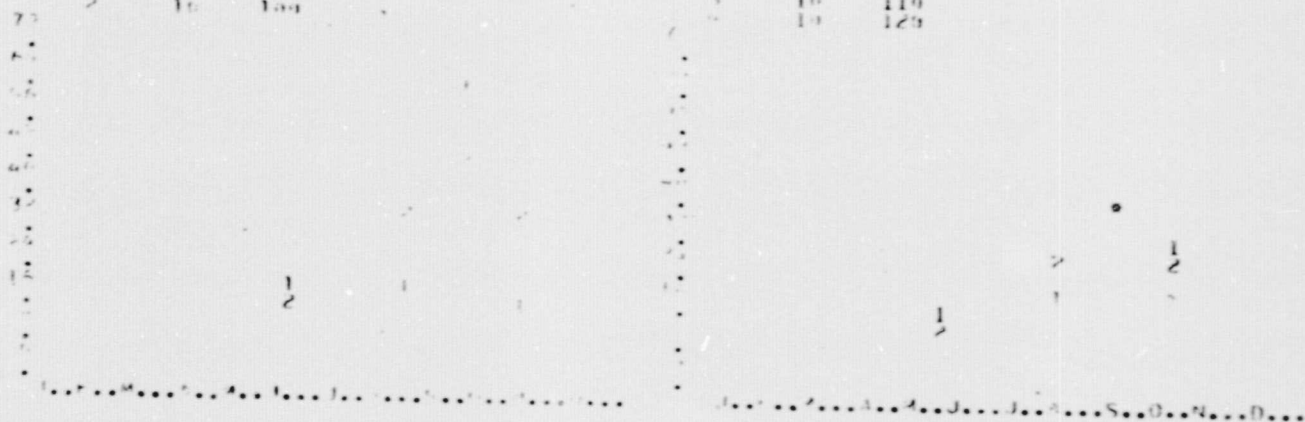
CATEGORY ...

AC ...

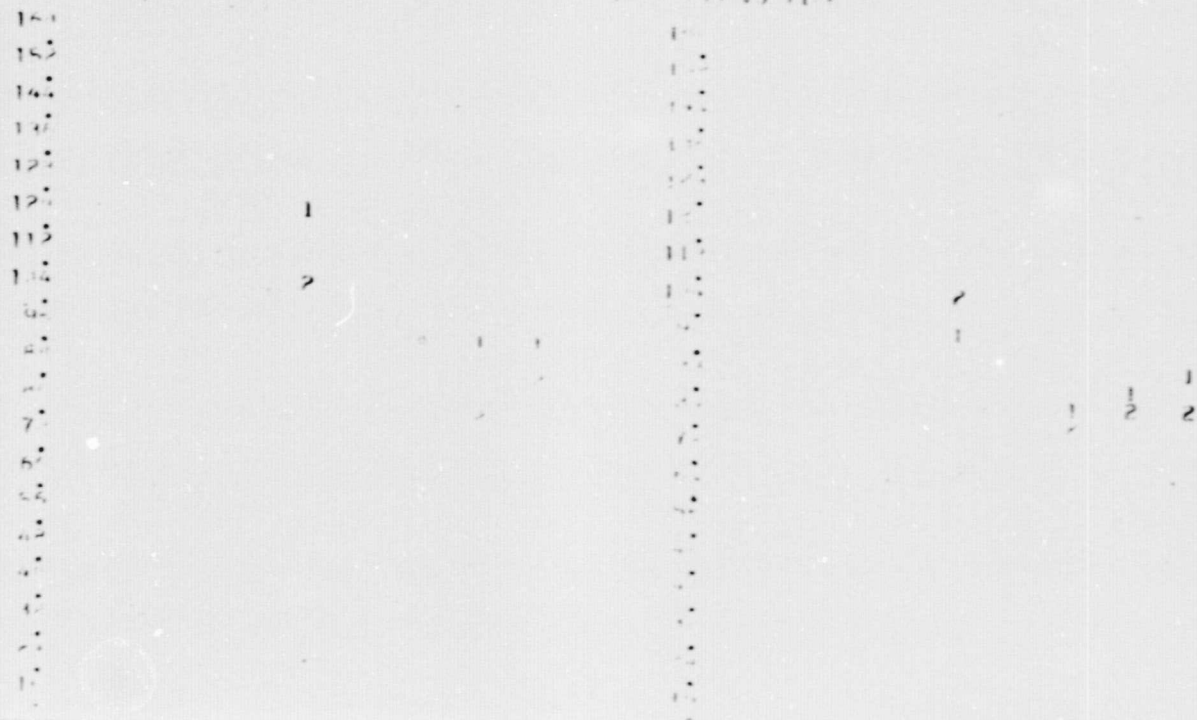
VS 117

VS 117

| DOT | LINE | PIXEL | VALUE |
|-----|------|-------|-------|
| 1   | 10   | 100   | 100   |
| 2   | 10   | 100   | 100   |



VS 117





| Case No. | Case Name |
|----------|-----------|
| 1001     | 1001      |
| 1002     | 1002      |
| 1003     | 1003      |
| 1004     | 1004      |
| 1005     | 1005      |
| 1006     | 1006      |
| 1007     | 1007      |
| 1008     | 1008      |
| 1009     | 1009      |
| 1010     | 1010      |
| 1011     | 1011      |
| 1012     | 1012      |
| 1013     | 1013      |
| 1014     | 1014      |
| 1015     | 1015      |
| 1016     | 1016      |
| 1017     | 1017      |
| 1018     | 1018      |
| 1019     | 1019      |
| 1020     | 1020      |
| 1021     | 1021      |
| 1022     | 1022      |
| 1023     | 1023      |
| 1024     | 1024      |
| 1025     | 1025      |
| 1026     | 1026      |
| 1027     | 1027      |
| 1028     | 1028      |
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| 1076     | 1076      |
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| 1078     | 1078      |
| 1079     | 1079      |
| 1080     | 1080      |
| 1081     | 1081      |
| 1082     | 1082      |
| 1083     | 1083      |
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| 1086     | 1086      |
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| 1097     | 1097      |
| 1098     | 1098      |
| 1099     | 1099      |
| 1100     | 1100      |
| 1101     | 1101      |
| 1102     | 1102      |
| 1103     | 1103      |
| 1104     | 1104      |
| 1105     | 1105      |
| 1106     | 1106      |
| 1107     | 1107      |
| 1108     | 1108      |
| 1109     | 1109      |
| 1110     | 1110      |
| 1111     | 1111      |
| 1112     | 1112      |
| 1113     | 1113      |
| 1114     | 1114      |
| 1115     | 1115      |
| 1116     | 1116      |
| 1117     | 1117      |
| 1118     | 1118      |
| 1119     | 1119      |
| 1120     | 1120      |
| 1121     | 1121      |
| 1122     | 1122      |
| 1123     | 1123      |
| 1124     | 1124      |
| 1125     | 1125      |
| 1126     | 1126      |
| 1127     | 1127      |
| 1128     | 1128      |
| 1129     | 1129      |
| 1130     | 1130      |
| 1131     | 1131      |
| 1132     | 1132      |
| 1133     | 1133      |
| 1134     | 1134      |
| 1135     | 1135      |
| 1136     | 1136      |
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| 1138     | 1138      |
| 1139     | 1139      |
| 1140     | 1140      |
| 1141     | 1141      |
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| 1145     | 1145      |
| 1146     | 1146      |
| 1147     | 1147      |
| 1148     | 1148      |
| 1149     | 1149      |
| 1150     | 1150      |
| 11       |           |

TOTAL NUMBER OF VOTES = 1000

$$T_1 = T_2 = T_3 = \dots$$
[illegible]
$$f(t) = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds + g(t),$$

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

| DOT LINE | PIXEL LABEL | DOT LINE | PIXEL LABEL | DOT LINE | PIXEL LABEL | DOT LINE | PIXEL LABEL |
|----------|-------------|----------|-------------|----------|-------------|----------|-------------|
| 5        | 10          | 5        | 10          | 5        | 10          | 5        | 10          |
| 1        | 1           | 1        | 1           | 1        | 1           | 1        | 1           |
| 2        | 2           | 2        | 2           | 2        | 2           | 2        | 2           |
| 3        | 3           | 3        | 3           | 3        | 3           | 3        | 3           |
| 4        | 4           | 4        | 4           | 4        | 4           | 4        | 4           |
| 5        | 5           | 5        | 5           | 5        | 5           | 5        | 5           |
| 6        | 6           | 6        | 6           | 6        | 6           | 6        | 6           |
| 7        | 7           | 7        | 7           | 7        | 7           | 7        | 7           |
| 8        | 8           | 8        | 8           | 8        | 8           | 8        | 8           |
| 9        | 9           | 9        | 9           | 9        | 9           | 9        | 9           |
| 10       | 10          | 10       | 10          | 10       | 10          | 10       | 10          |
| 11       | 11          | 11       | 11          | 11       | 11          | 11       | 11          |
| 12       | 12          | 12       | 12          | 12       | 12          | 12       | 12          |
| 13       | 13          | 13       | 13          | 13       | 13          | 13       | 13          |
| 14       | 14          | 14       | 14          | 14       | 14          | 14       | 14          |
| 15       | 15          | 15       | 15          | 15       | 15          | 15       | 15          |
| 16       | 16          | 16       | 16          | 16       | 16          | 16       | 16          |
| 17       | 17          | 17       | 17          | 17       | 17          | 17       | 17          |
| 18       | 18          | 18       | 18          | 18       | 18          | 18       | 18          |
| 19       | 19          | 19       | 19          | 19       | 19          | 19       | 19          |
| 20       | 20          | 20       | 20          | 20       | 20          | 20       | 20          |
| 21       | 21          | 21       | 21          | 21       | 21          | 21       | 21          |
| 22       | 22          | 22       | 22          | 22       | 22          | 22       | 22          |
| 23       | 23          | 23       | 23          | 23       | 23          | 23       | 23          |
| 24       | 24          | 24       | 24          | 24       | 24          | 24       | 24          |
| 25       | 25          | 25       | 25          | 25       | 25          | 25       | 25          |
| 26       | 26          | 26       | 26          | 26       | 26          | 26       | 26          |
| 27       | 27          | 27       | 27          | 27       | 27          | 27       | 27          |
| 28       | 28          | 28       | 28          | 28       | 28          | 28       | 28          |
| 29       | 29          | 29       | 29          | 29       | 29          | 29       | 29          |
| 30       | 30          | 30       | 30          | 30       | 30          | 30       | 30          |
| 31       | 31          | 31       | 31          | 31       | 31          | 31       | 31          |
| 32       | 32          | 32       | 32          | 32       | 32          | 32       | 32          |
| 33       | 33          | 33       | 33          | 33       | 33          | 33       | 33          |
| 34       | 34          | 34       | 34          | 34       | 34          | 34       | 34          |
| 35       | 35          | 35       | 35          | 35       | 35          | 35       | 35          |
| 36       | 36          | 36       | 36          | 36       | 36          | 36       | 36          |
| 37       | 37          | 37       | 37          | 37       | 37          | 37       | 37          |
| 38       | 38          | 38       | 38          | 38       | 38          | 38       | 38          |
| 39       | 39          | 39       | 39          | 39       | 39          | 39       | 39          |
| 40       | 40          | 40       | 40          | 40       | 40          | 40       | 40          |
| 41       | 41          | 41       | 41          | 41       | 41          | 41       | 41          |
| 42       | 42          | 42       | 42          | 42       | 42          | 42       | 42          |
| 43       | 43          | 43       | 43          | 43       | 43          | 43       | 43          |
| 44       | 44          | 44       | 44          | 44       | 44          | 44       | 44          |
| 45       | 45          | 45       | 45          | 45       | 45          | 45       | 45          |
| 46       | 46          | 46       | 46          | 46       | 46          | 46       | 46          |
| 47       | 47          | 47       | 47          | 47       | 47          | 47       | 47          |
| 48       | 48          | 48       | 48          | 48       | 48          | 48       | 48          |
| 49       | 49          | 49       | 49          | 49       | 49          | 49       | 49          |
| 50       | 50          | 50       | 50          | 50       | 50          | 50       | 50          |
| 51       | 51          | 51       | 51          | 51       | 51          | 51       | 51          |
| 52       | 52          | 52       | 52          | 52       | 52          | 52       | 52          |
| 53       | 53          | 53       | 53          | 53       | 53          | 53       | 53          |
| 54       | 54          | 54       | 54          | 54       | 54          | 54       | 54          |
| 55       | 55          | 55       | 55          | 55       | 55          | 55       | 55          |
| 56       | 56          | 56       | 56          | 56       | 56          | 56       | 56          |
| 57       | 57          | 57       | 57          |          |             |          |             |

Figure 10 consists of five sub-plots, labeled 1 through 5, each showing a 100-line image. The plots are arranged in a row. Each plot has a horizontal axis labeled 'DOT LINE PIXEL LABEL' with values 10, 100, and 5. The vertical axis is labeled 'DOT LINE PIXEL LABEL' with values 10, 100, and 5. The plots show the effect of the number of pixels per line on the resolution of a 100-line image. Plot 1 shows a resolution of 100 lines per inch with 100 pixels per line. Plot 2 shows a resolution of 100 lines per inch with 50 pixels per line. Plot 3 shows a resolution of 100 lines per inch with 25 pixels per line. Plot 4 shows a resolution of 100 lines per inch with 10 pixels per line. Plot 5 shows a resolution of 100 lines per inch with 5 pixels per line. The plots show that as the number of pixels per line decreases, the resolution of the image decreases.

| DOT               | LINE | PIXEL | LABEL | DOT               | LINE | PIXEL | LABEL | DOT               | LINE | PIXEL | LABEL | DOT               | LINE | PIXEL | LABEL | DOT               | LINE | PIXEL | LABEL |
|-------------------|------|-------|-------|-------------------|------|-------|-------|-------------------|------|-------|-------|-------------------|------|-------|-------|-------------------|------|-------|-------|
| 16                | 10   | 100   |       | 17                | 10   | 110   |       | 17                | 10   | 160   |       | 17                | 10   | 170   |       | 17                | 10   | 180   |       |
| 80                |      |       |       | 80                |      |       |       | 80                |      |       |       | 80                |      |       |       | 80                |      |       |       |
| 70                |      |       |       | 70                |      |       |       | 70                |      |       |       | 70                |      |       |       | 70                |      |       |       |
| 60                |      |       |       | 60                |      |       |       | 60                |      |       |       | 60                |      |       |       | 60                |      |       |       |
| 50                |      |       |       | 50                |      |       |       | 50                |      |       |       | 50                |      |       |       | 50                |      |       |       |
| 40                |      |       |       | 40                |      |       |       | 40                |      |       |       | 40                |      |       |       | 40                |      |       |       |
| 30                |      |       |       | 30                |      |       |       | 30                |      |       |       | 30                |      |       |       | 30                |      |       |       |
| 20                |      |       |       | 20                |      |       |       | 20                |      |       |       | 20                |      |       |       | 20                |      |       |       |
| 10                |      |       |       | 10                |      |       |       | 10                |      |       |       | 10                |      |       |       | 10                |      |       |       |
| 0                 |      |       |       | 0                 |      |       |       | 0                 |      |       |       | 0                 |      |       |       | 0                 |      |       |       |
| 30..50..70..90... |      |       |       | 30..50..70..90... |      |       |       | 30..50..70..90... |      |       |       | 30..50..70..90... |      |       |       | 30..50..70..90... |      |       |       |

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SITE = 1099 DATE = 10/10/71 CATEGORY = PLUTED No. 8-5.

ACQUISITION = 7-15-71  
SOL LINES = 11

FIELD 1

| DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 1 10 130             | 2 20 140             | 3 30 150             | 4 40 160             | 5 50 170             | 6 60 180             |
| 60                   | 50                   | 40                   | 30                   | 20                   | 10                   |
| 50                   | 40                   | 30                   | 20                   | 10                   | 0                    |
| 40                   | 30                   | 20                   | 10                   | 0                    | 0                    |
| 30                   | 20                   | 10                   | 0                    | 0                    | 0                    |
| 20                   | 10                   | 0                    | 0                    | 0                    | 0                    |
| 10                   | 0                    | 0                    | 0                    | 0                    | 0                    |
| 0                    | 0                    | 0                    | 0                    | 0                    | 0                    |
| 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    |

| DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 7 20 60              | 8 30 70              | 9 40 80              | 10 50 90             | 11 60 100            | 12 70 110            |
| 60                   | 50                   | 40                   | 30                   | 20                   | 10                   |
| 50                   | 40                   | 30                   | 20                   | 10                   | 0                    |
| 40                   | 30                   | 20                   | 10                   | 0                    | 0                    |
| 30                   | 20                   | 10                   | 0                    | 0                    | 0                    |
| 20                   | 10                   | 0                    | 0                    | 0                    | 0                    |
| 10                   | 0                    | 0                    | 0                    | 0                    | 0                    |
| 0                    | 0                    | 0                    | 0                    | 0                    | 0                    |
| 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    |

| DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL | DOT LINE PIXEL LABEL |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 13 20 120            | 14 30 130            | 15 40 140            | 16 50 150            | 17 60 160            | 18 70 170            |
| 60                   | 50                   | 40                   | 30                   | 20                   | 10                   |
| 50                   | 40                   | 30                   | 20                   | 10                   | 0                    |
| 40                   | 30                   | 20                   | 10                   | 0                    | 0                    |
| 30                   | 20                   | 10                   | 0                    | 0                    | 0                    |
| 20                   | 10                   | 0                    | 0                    | 0                    | 0                    |
| 10                   | 0                    | 0                    | 0                    | 0                    | 0                    |
| 0                    | 0                    | 0                    | 0                    | 0                    | 0                    |
| 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    | 00..50..70..90...    |

5117 = 1469

 $\text{GeTe} - \text{Ge} - \text{Te}$ 

Culbertson et al. 2000 3035

$$AC \cap (T \cup \{t\}) \cap Q = \emptyset$$
$$\mathcal{S}(\mathbb{R}^n) \rightarrow \mathcal{S}'(\mathbb{R}^n) \quad \mathcal{S}_1 \mapsto \mathcal{S}_1^*$$

— 1 —

| OUT LINE          | PIXEL LABEL | OUT LINE          | PIXEL LABEL | OUT LINE          | PIXEL LABEL | OUT LINE          | PIXEL LABEL | OUT LINE          | PIXEL LABEL |
|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|
| 5                 | 30          | 5                 | 30          | 5                 | 30          | 5                 | 30          | 5                 | 30          |
| 60                |             | 60                |             | 60                |             | 60                |             | 60                |             |
| 50                |             | 50                |             | 50                |             | 50                |             | 50                |             |
| 40                |             | 40                |             | 40                |             | 40                |             | 40                |             |
| 30                |             | 30                |             | 30                |             | 30                |             | 30                |             |
| 20                |             | 20                |             | 20                |             | 20                |             | 20                |             |
| 10                |             | 10                |             | 10                |             | 10                |             | 10                |             |
| 0                 |             | 0                 |             | 0                 |             | 0                 |             | 0                 |             |
| 10..50..70..90... |             | 10..50..70..90... |             | 10..50..70..90... |             | 10..50..70..90... |             | 10..50..70..90... |             |

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# INPUT SUMMARY

CHANNEL C 1,2,3,4,5,6,7,8  
 SOIL LINE 4,5,6,7,8  
 SECT 1000  
 DATE ADPT 12 1950  
 DATA 400  
 LABEL LURELLE  
 SELECTED A.H.C  
 FILE LISTING  
 AT TEST 1  
 ACQUIS 77140, 77200, 77250, 77300  
 01.10

Example of COMPARE listing

## TABLE 1

## SUMMARY

SITE = 1504      DATE GENERATED = APRIL 9, 1980

ACQUISITION 1 = 17150

ACQUISITION 2 = 17200

ACQUISITION 3 = 17250

ACQUISITION 4 = 17300

LEVEL FILE NAME = LISTGJM3

ANALYST NAME = TEST AT

DATE LABELS UPDATED = APRIL 23, 1980

NO. OF LABELED DOTS = 25

TABLE II

Bolt Locations

Reference to Fig. 1

H1 = 1.00      Date of Installation = APRIL 9, 1950

ACQUISITION 1 = 77150

ACQUISITION 2 = 77200

ACQUISITION 3 = 77250

ACQUISITION 4 = 77300

Fig. 1

| ORIGINAL BOLTS |      |       | NEW BOLTS |      |       |
|----------------|------|-------|-----------|------|-------|
| BOLT NO.       | LINE | PICT. | Layer     | LINE | PICT. |
| 1              | 10   | 100   |           | 10   | 100   |
| 11             | 10   | 110   |           | 10   | 110   |
| 12             | 10   | 120   |           | 10   | 120   |
| 13             | 10   | 130   |           | 10   | 130   |
| 14             | 10   | 140   |           | 10   | 140   |
| 15             | 10   | 150   |           | 10   | 150   |
| 16             | 10   | 160   |           | 10   | 160   |
| 17             | 10   | 170   |           | 10   | 170   |
| 18             | 10   | 180   |           | 10   | 180   |
| 19             | 10   | 190   |           | 10   | 190   |
| 20             | 20   | 200   |           | 20   | 200   |
| 21             | 20   | 210   |           | 20   | 210   |
| 22             | 20   | 220   |           | 20   | 220   |
| 23             | 20   | 230   |           | 20   | 230   |
| 24             | 20   | 240   |           | 20   | 240   |
| 25             | 20   | 250   |           | 20   | 250   |
| 26             | 20   | 260   |           | 20   | 260   |
| 27             | 20   | 270   |           | 20   | 270   |
| 28             | 20   | 280   |           | 20   | 280   |
| 29             | 20   | 290   |           | 20   | 290   |
| 30             | 30   | 300   |           | 30   | 300   |
| 31             | 30   | 310   |           | 30   | 310   |
| 32             | 30   | 320   |           | 30   | 320   |
| 33             | 30   | 330   |           | 30   | 330   |
| 34             | 30   | 340   |           | 30   | 340   |
| 35             | 30   | 350   |           | 30   | 350   |
| 36             | 30   | 360   |           | 30   | 360   |
| 37             | 30   | 370   |           | 30   | 370   |
| 38             | 30   | 380   |           | 30   | 380   |
| 39             | 30   | 390   |           | 30   | 390   |
| 40             | 40   | 400   |           | 40   | 400   |
| 41             | 40   | 410   |           | 40   | 410   |
| 42             | 40   | 420   |           | 40   | 420   |
| 43             | 40   | 430   |           | 40   | 430   |
| 44             | 40   | 440   |           | 40   | 440   |
| 45             | 40   | 450   |           | 40   | 450   |
| 46             | 40   | 460   |           | 40   | 460   |
| 47             | 40   | 470   |           | 40   | 470   |
| 48             | 40   | 480   |           | 40   | 480   |
| 49             | 40   | 490   |           | 40   | 490   |
| 50             | 50   | 500   |           | 50   | 500   |
| 51             | 50   | 510   |           | 50   | 510   |
| 52             | 50   | 520   |           | 50   | 520   |
| 53             | 50   | 530   |           | 50   | 530   |
| 54             | 50   | 540   |           | 50   | 540   |
| 55             | 50   | 550   |           | 50   | 550   |
| 56             | 50   | 560   |           | 50   | 560   |
| 57             | 50   | 570   |           | 50   | 570   |
| 58             | 50   | 580   |           | 50   | 580   |
| 59             | 50   | 590   |           | 50   | 590   |
| 60             | 60   | 600   |           | 60   | 600   |
| 61             | 60   | 610   |           | 60   | 610   |
| 62             | 60   | 620   |           | 60   | 620   |
| 63             | 60   | 630   |           | 60   | 630   |
| 64             | 60   | 640   |           | 60   | 640   |
| 65             | 60   | 650   |           | 60   | 650   |
| 66             | 60   | 660   |           | 60   | 660   |
| 67             | 60   | 670   |           | 60   | 670   |
| 68             | 60   | 680   |           | 60   | 680   |
| 69             | 60   | 690   |           | 60   | 690   |
| 70             | 70   | 700   |           | 70   | 700   |
| 71             | 70   | 710   |           | 70   | 710   |
| 72             | 70   | 720   |           | 70   | 720   |

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SITE = 1009

DATE (G. F. WAT.) = APRIL 9, 1980

GRID 1

| W. F. WAT. GITS |      |       | G. F. WAT. GITS |      |       |
|-----------------|------|-------|-----------------|------|-------|
| LINE            | LINE | PIXEL | LINE            | LINE | PIXEL |
| 1               | 40   | 160   | 40              | 160  | 160   |
| 10              | 40   | 170   | 40              | 170  | 170   |
| 20              | 40   | 180   | 40              | 180  | 180   |
| 30              | 40   | 190   | 40              | 190  | 190   |
| 40              | 50   | 10    | 50              | 10   | 10    |
| 50              | 50   | 20    | 50              | 20   | 20    |
| 60              | 50   | 30    | 50              | 30   | 30    |
| 70              | 50   | 40    | 50              | 40   | 40    |
| 80              | 50   | 50    | 50              | 50   | 50    |
| 90              | 50   | 60    | 50              | 60   | 60    |
| 100             | 50   | 70    | 50              | 70   | 70    |
| 110             | 50   | 80    | 50              | 80   | 80    |
| 120             | 50   | 90    | 50              | 90   | 90    |
| 130             | 50   | 100   | 50              | 100  | 100   |
| 140             | 50   | 110   | 50              | 110  | 110   |
| 150             | 50   | 120   | 50              | 120  | 120   |
| 160             | 50   | 130   | 50              | 130  | 130   |
| 170             | 50   | 140   | 50              | 140  | 140   |
| 180             | 50   | 150   | 50              | 150  | 150   |
| 190             | 50   | 160   | 50              | 160  | 160   |
| 200             | 50   | 170   | 50              | 170  | 170   |
| 210             | 50   | 180   | 50              | 180  | 180   |
| 220             | 50   | 190   | 50              | 190  | 190   |
| 230             | 60   | 10    | 60              | 10   | 10    |
| 240             | 60   | 20    | 60              | 20   | 20    |
| 250             | 60   | 30    | 60              | 30   | 30    |
| 260             | 60   | 40    | 60              | 40   | 40    |
| 270             | 60   | 50    | 60              | 50   | 50    |
| 280             | 60   | 60    | 60              | 60   | 60    |
| 290             | 60   | 70    | 60              | 70   | 70    |
| 300             | 60   | 80    | 60              | 80   | 80    |
| 310             | 60   | 90    | 60              | 90   | 90    |
| 320             | 60   | 100   | 60              | 100  | 100   |
| 330             | 60   | 110   | 60              | 110  | 110   |
| 340             | 60   | 120   | 60              | 120  | 120   |
| 350             | 60   | 130   | 60              | 130  | 130   |
| 360             | 60   | 140   | 60              | 140  | 140   |
| 370             | 60   | 150   | 60              | 150  | 150   |
| 380             | 60   | 160   | 60              | 160  | 160   |
| 390             | 60   | 170   | 60              | 170  | 170   |
| 400             | 60   | 180   | 60              | 180  | 180   |
| 410             | 60   | 190   | 60              | 190  | 190   |
| 420             | 70   | 10    | 70              | 10   | 10    |
| 430             | 70   | 20    | 70              | 20   | 20    |
| 440             | 70   | 30    | 70              | 30   | 30    |
| 450             | 70   | 40    | 70              | 40   | 40    |
| 460             | 70   | 50    | 70              | 50   | 50    |
| 470             | 70   | 60    | 70              | 60   | 60    |
| 480             | 70   | 70    | 70              | 70   | 70    |
| 490             | 70   | 80    | 70              | 80   | 80    |
| 500             | 70   | 90    | 70              | 90   | 90    |
| 510             | 70   | 100   | 70              | 100  | 100   |
| 520             | 70   | 110   | 70              | 110  | 110   |
| 530             | 70   | 120   | 70              | 120  | 120   |
| 540             | 70   | 130   | 70              | 130  | 130   |
| 550             | 70   | 140   | 70              | 140  | 140   |
| 560             | 70   | 150   | 70              | 150  | 150   |
| 570             | 70   | 160   | 70              | 160  | 160   |
| 580             | 70   | 170   | 70              | 170  | 170   |
| 590             | 70   | 180   | 70              | 180  | 180   |
| 600             | 70   | 190   | 70              | 190  | 190   |
| 610             | 80   | 10    | 80              | 10   | 10    |
| 620             | 80   | 20    | 80              | 20   | 20    |
| 630             | 80   | 30    | 80              | 30   | 30    |

SITE = 1049

DATE (or ESTIMATED) = APRIL 9, 1950

0-15 1

| PILOT |      |       | PILOT |      |       |
|-------|------|-------|-------|------|-------|
| LINE  | LINE | PIXEL | LINE  | LINE | PIXEL |
| 107   | 49   | 40    | 49    | 49   | 40    |
| 108   | 50   | 50    | 50    | 50   | 50    |
| 109   | 51   | 50    | 51    | 51   | 50    |
| 110   | 52   | 70    | 52    | 52   | 70    |
| 111   | 53   | 80    | 53    | 53   | 80    |
| 112   | 54   | 90    | 54    | 54   | 90    |
| 113   | 55   | 100   | 55    | 55   | 100   |
| 114   | 56   | 110   | 56    | 56   | 110   |
| 115   | 57   | 120   | 57    | 57   | 120   |
| 116   | 58   | 130   | 58    | 58   | 130   |
| 117   | 59   | 140   | 59    | 59   | 140   |
| 118   | 60   | 150   | 60    | 60   | 150   |
| 119   | 61   | 160   | 61    | 61   | 160   |
| 120   | 62   | 170   | 62    | 62   | 170   |
| 121   | 63   | 180   | 63    | 63   | 180   |
| 122   | 64   | 190   | 64    | 64   | 190   |
| 123   | 65   | 20    | 65    | 65   | 20    |
| 124   | 66   | 30    | 66    | 66   | 30    |
| 125   | 67   | 40    | 67    | 67   | 40    |
| 126   | 68   | 50    | 68    | 68   | 50    |
| 127   | 69   | 60    | 69    | 69   | 60    |
| 128   | 70   | 70    | 70    | 70   | 70    |
| 129   | 71   | 80    | 71    | 71   | 80    |
| 130   | 72   | 90    | 72    | 72   | 90    |
| 131   | 73   | 100   | 73    | 73   | 100   |
| 132   | 74   | 110   | 74    | 74   | 110   |
| 133   | 75   | 120   | 75    | 75   | 120   |
| 134   | 76   | 130   | 76    | 76   | 130   |
| 135   | 77   | 140   | 77    | 77   | 140   |
| 136   | 78   | 150   | 78    | 78   | 150   |
| 137   | 79   | 160   | 79    | 79   | 160   |
| 138   | 80   | 170   | 80    | 80   | 170   |
| 139   | 81   | 180   | 81    | 81   | 180   |
| 140   | 82   | 190   | 82    | 82   | 190   |
| 141   | 83   | 20    | 83    | 83   | 20    |
| 142   | 84   | 30    | 84    | 84   | 30    |
| 143   | 85   | 40    | 85    | 85   | 40    |
| 144   | 86   | 50    | 86    | 86   | 50    |
| 145   | 87   | 60    | 87    | 87   | 60    |
| 146   | 88   | 70    | 88    | 88   | 70    |
| 147   | 89   | 80    | 89    | 89   | 80    |
| 148   | 90   | 90    | 90    | 90   | 90    |
| 149   | 91   | 100   | 91    | 91   | 100   |
| 150   | 92   | 110   | 92    | 92   | 110   |
| 151   | 93   | 120   | 93    | 93   | 120   |
| 152   | 94   | 130   | 94    | 94   | 130   |
| 153   | 95   | 140   | 95    | 95   | 140   |
| 154   | 96   | 150   | 96    | 96   | 150   |
| 155   | 97   | 160   | 97    | 97   | 160   |
| 156   | 98   | 170   | 98    | 98   | 170   |
| 157   | 99   | 180   | 99    | 99   | 180   |
| 158   | 100  | 190   | 100   | 100  | 190   |
| 159   | 101  | 20    | 101   | 101  | 20    |
| 160   | 102  | 30    | 102   | 102  | 30    |
| 161   | 103  | 40    | 103   | 103  | 40    |
| 162   | 104  | 50    | 104   | 104  | 50    |
| 163   | 105  | 60    | 105   | 105  | 60    |
| 164   | 106  | 70    | 106   | 106  | 70    |
| 165   | 107  | 80    | 107   | 107  | 80    |
| 166   | 108  | 90    | 108   | 108  | 90    |
| 167   | 109  | 100   | 109   | 109  | 100   |
| 168   | 110  | 110   | 110   | 110  | 110   |
| 169   | 111  | 120   | 111   | 111  | 120   |
| 170   | 112  | 130   | 112   | 112  | 130   |
| 171   | 113  | 140   | 113   | 113  | 140   |
| 172   | 114  | 150   | 114   | 114  | 150   |
| 173   | 115  | 160   | 115   | 115  | 160   |
| 174   | 116  | 170   | 116   | 116  | 170   |
| 175   | 117  | 180   | 117   | 117  | 180   |
| 176   | 118  | 190   | 118   | 118  | 190   |
| 177   | 119  | 20    | 119   | 119  | 20    |
| 178   | 120  | 30    | 120   | 120  | 30    |
| 179   | 121  | 40    | 121   | 121  | 40    |
| 180   | 122  | 50    | 122   | 122  | 50    |
| 181   | 123  | 60    | 123   | 123  | 60    |
| 182   | 124  | 70    | 124   | 124  | 70    |
| 183   | 125  | 80    | 125   | 125  | 80    |
| 184   | 126  | 90    | 126   | 126  | 90    |
| 185   | 127  | 100   | 127   | 127  | 100   |
| 186   | 128  | 110   | 128   | 128  | 110   |
| 187   | 129  | 120   | 129   | 129  | 120   |
| 188   | 130  | 130   | 130   | 130  | 130   |
| 189   | 131  | 140   | 131   | 131  | 140   |
| 190   | 132  | 150   | 132   | 132  | 150   |
| 191   | 133  | 160   | 133   | 133  | 160   |
| 192   | 134  | 170   | 134   | 134  | 170   |
| 193   | 135  | 180   | 135   | 135  | 180   |
| 194   | 136  | 190   | 136   | 136  | 190   |
| 195   | 137  | 20    | 137   | 137  | 20    |
| 196   | 138  | 30    | 138   | 138  | 30    |
| 197   | 139  | 40    | 139   | 139  | 40    |
| 198   | 140  | 50    | 140   | 140  | 50    |
| 199   | 141  | 60    | 141   | 141  | 60    |
| 200   | 142  | 70    | 142   | 142  | 70    |
| 201   | 143  | 80    | 143   | 143  | 80    |
| 202   | 144  | 90    | 144   | 144  | 90    |
| 203   | 145  | 100   | 145   | 145  | 100   |



SITE = 1499

DATE GENERATED = APRIL 9, 1980

UNIT 1

| ORIGINAL DATA |      |       | NEW DATA |      |       |
|---------------|------|-------|----------|------|-------|
| LINE NO       | LINE | PIXEL | LINE NO  | LINE | PIXEL |
| 201           | 110  | 110   | 110      | 110  | 110   |
| 202           | 110  | 120   | 110      | 110  | 120   |
| 203           | 110  | 130   | 110      | 110  | 130   |
| 204           | 110  | 140   | 110      | 110  | 140   |
| 205           | 110  | 150   | 110      | 110  | 150   |
| 206           | 110  | 160   | 110      | 110  | 160   |
| 207           | 110  | 170   | 110      | 110  | 170   |
| 208           | 110  | 180   | 110      | 110  | 180   |
| 209           | 110  | 190   | 110      | 110  | 190   |

ORIGINAL PAGE IS  
OF POOR QUALITY